

**The Link between Perceived Parenting Styles, Cognitive Schemas and
Psychopathology**

**- A Thesis
Submitted to
The Graduate School
The Chinese University of Hong Kong**



**In Partial Fulfillment
Of the Requirements for the Degree of
Master of Philosophy
In Clinical Psychology**

by

**Maggie, Wong Mei Ting
Division of Psychology
June 1998**

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Abstract

Beck's cognitive model postulated that cognitive schema was the basic cognitive structure. Different psychological disorders were characterized by different cognitive schemas (content-specificity hypothesis, Beck and Emery, 1985). Young (1990, 1994) also proposed that different personality disorders was characterized by different maladaptive schemas. One of the origins of these schemas were supposed to be shaped by childhood experiences. The present study tried to examine the relationship between perceived parenting styles, maladaptive cognitive schemas and different types of psychopathology (depression, anxiety, and aggression) among adolescents. A mediational model was proposed. It was hypothesized that parenting styles influenced the formation of maladaptive schemas, which in turn led to psychopathology. Cognitive schemas were the mediators of parenting styles and psychopathology. A total of 790 secondary school students between age of 12 and 19 participated in the present research. Factor analyses were performed to examine the factor structure of the parenting scale and the Schema Questionnaire (SQ, Young and Brown, 1994). Results indicated they had sound factor structures. Correlation, regression analyses, hierarchical regression analyses, and structural equation modeling were further conducted to test the hypothesis. Findings generally supported the hypothesis that parenting styles were mediated by cognitive schemas. Furthermore, depression, anxiety, and aggression were characterized by different types of maladaptive schemas and parenting styles. Implications of these results as well as limitations and future research direction were discussed.

摘要

Aaron T. Beck 的認知模式假設認知構系 (cognitive schema) 是認知結構的基本。不同的心理病症有不同的認知構系 (內容指定假設 -- content-specificity hypothesis, Beck and Emery, 1985)。Young (1990, 1994) 的理論亦提出不同的人格障礙有不同不適當的認知構系。兒時的經驗被認為是形成認知構系的其中一個原點。是項研究嘗試審查青少年對父母教養他們的方式、不適當的認知構系及心理病三者之間的關係 (包括抑鬱、焦慮及攻擊性行為)。對於三者的關係, 是項研究提出一個中介的模式 (mediation model)。研究假設父母教養方式會影響不同不適當認知構系的形成, 這些構系從而促成心理病。即是, 認知構系居間於父母教養方式與心理病之間。七百九十個年齡介乎十二至十九歲的中學生參與是項研究。本研究選用了因素分析技巧來分析父母教養方式量表及認知構系問卷 (Schema Questionnaire; Young and Brown, 1994) 的因素結構, 結果顯示它們有良好的因素結構。另外, 本研究亦對資料進行了相關、迴歸、層序迴歸及結構公式模式的分析, 以測試是項研究的假設理論。結果顯示父母教養方式受認知結構調間。再者, 結果亦反映出抑鬱、焦慮及攻擊性行為是連帶著不同不適當的認知構系及父母教養方式。本文將討論是項研究帶來的訊息、研究上的限制及將來的研究方向。

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CHAPTER I

Introduction

In recent years, cognitive theories have gained prominence in the field of psychopathology. Among these theories, Beck's cognitive model of psychopathology (Aaron T. Beck 1967, 1976, 1996; Beck, Rush, Shaw, and Emery, 1979) is regarded as the most influential. His cognitive therapy is a system of psychotherapy which provides (1) a comprehensive theory of psychopathology that drives the structure of psychotherapy; (2) a body of knowledge and empirical findings which support the theory, and (3) research findings which demonstrates its effectiveness.

Beck's Cognitive Model

Beck's cognitive model evolved from systematic clinical observations and experimental testing. Over the past 30 years, his theory has undergone important changes and development.

In his earliest formulation of the cognitive model, Beck was primarily interested in understanding and treating depression (Beck, 1967, 1976; Beck et al., 1979). Recently, the model is being expanded to include a wide variety of psychological disorders, such as personality disorders (e.g., Beck, Freeman, and Associates, 1990), anxiety disorders (e.g. Beck and Emery, 1985; Clark and Steer, 1996, Beck and Clark, 1997), substance abuse (e.g., Beck, Wright, Newman, and Liese, 1993; Liese, 1993, 1994; Liese and Beck, 1996), panic disorder (e.g., Clark, 1988), eating disorder (e.g., Fairburn, 1981; Garner and Bemis, 1982), and social phobia (e.g., Beck and Emery, 1985, Chambless and Hope, 1996).

Regarding Beck's theory of psychopathology (1967, 1976, 1987), it is based on an information-processing model. Beck postulated that systematic information-processing biases were evident in all psychopathological states (Beck, 1967, 1976, 1987). The

cognitive model assumed that individuals were not passive recipients of environmental stimuli, but were actively involved in the construction of their own realities (Beck, 1967, 1987). They perceived, interpreted and assigned meanings to events as well as formulated strategies in order to adapt the environments. Their responses, in form of affective and behavioral, were largely influenced by the cognitive appraisals made.

The focus of Beck's cognitive model was originally based on investigating depression and he postulated several cognitive factors as concomitants of depression (Beck, 1967, 1976, 1987). He did not limit a sequential unidirectional relationship in which cognition always preceded emotion, but assumed that cognition, emotion, and behavior were reciprocally determining and interacting to each other (Beck, 1991). He invoked three sets of cognitive concepts to explain psychological aspects of depression, they were: the negative cognitive triad (i.e., the negative judgments in which reported by the depressed patients related to themselves, their circumstances, and their futures), dysfunctional schemas (or underlying assumptions / core beliefs), and cognitive distortions (or faulty information processing) (cf. Hagga, Dyck, and Ernst, 1991).

According to this theory, all depressed people were said to show a negative cognitive triad. People with depression were said to had had a number of pervasive negative thoughts which would result in at least the partial exclusion of positive thoughts (Beck, 1987). They were also automatic in that the thoughts were "repetitive, persistent, and not readily controllable" (Beck, 1987). Consequently, these negative cognitions resulted in the affective, behavioral, and somatic symptoms of depression, which were maintained by their negative cognitive schemas, even when they were confronted with contradicting evidence. For example, depressed people might have the schema such as "If I am not successful in my work, then I am worthless". It could be triggered by an external event like reprimand at work. Once the schema was activated, it would produce

systematic errors of thinking (i.e., cognitive distortions or errors, such as all-or-none thinking, arbitrary inference, overgeneralization, magnification and minimization [discuss below]). These cognitive distortions would lead to negative automatic thoughts, reflecting themes of loss and revealing negative views of the self, the world, and the future (i.e., negative cognitive triad). In turn, it would lead to depression and would generate and sustain the negative triad found in depression.

Schemas

As mentioned above, one of the central themes of Beck's cognitive model was cognitive schemas (also known as "basic beliefs" or "assumptions") (Beck, 1976; Beck et al., 1979). They were cognitive structures that hold core beliefs. Dysfunctional schemas were hypothesized to be diatheses for depression (e.g., Beck 1967, 1976; Beck et al., 1979; Young, 1990, 1994; Stein and Young, 1992). Beck emphasized the important of schemas in depression and provided the following definition:

"A schema is a [cognitive] structure of screening, coding, and evaluating the stimuli that impinge on the organism ... On the basis of this matrix of schemas, not only the individual is able to orient himself in relation to time and space but also to categorize and interpret experiences in a meaningful way (Beck, 1967)".

Depressed individuals were assumed to have stable cognitive schemas that developed as a consequence of early learning (Beck et al., 1979). According to the cognitive theory, the cognitive schemas predisposed people toward negative interpretations of life events (i.e., cognitive distortions or automatic thoughts), which in turn engaging them in depression. In depression, dysfunctional schemas related to the person's self-concept and expectations were activated leading to systematic errors of

thinking. Some of the cognitive distortions typically found in depressed people included the tendency to think in extreme or absolute terms (all-or-none thinking), the tendency to draw negative conclusions without concrete evidence (arbitrary inference), the tendency to draw negative global conclusions on the basis of one fact or isolated incident (overgeneralization), the tendency to overemphasize the importance of negative events and to under-emphasize the significance of positive experiences (magnification and minimization), and the tendency to focus on negative details and to base conclusions on the negative details while ignoring more important features of a situation (selective abstraction) (Beck, 1967, 1976, 1987). These cognitive distortions could produce and maintain the negative cognitive triad seen in depression.

Under the theory on schemas, the content of schemas was latent or out of the person's awareness until a relevant or particular life event evoked the schema. For example, the dysfunctional schema "If everyone doesn't like me, I am worthless" could be activated by a romantic breakup. It was proposed that individuals reacted to their cognitive appraisals of the environment and not to the objective environment itself. Therefore, at any given time a schema might be strongly activated or completely dominant or somewhere in between.

In short, schemas were proposed to serve as the underlying predisposition that guided the selective information processing thereby maintaining the characteristic negative views of the self, world, and future. They were "relatively stable cognitive patterns [which] form the basis for the regularity of interpretations of a particular set of situation" (Beck et al., 1979), and as "stable cognitive patterns through which events are proceeded". They "provide the instructions to guide the focus, direction, and qualities of daily life and special contingencies" (Beck et al., 1990, p. 4). For instance, a depressive person would employ negative cognitive schemas to interpret different events and construct experiences.

This schema was relatively stable and self-maintained. Hence, it was regarded as a stable cognitive diathesis or vulnerability to depression. Dysfunctional feelings and behaviors were largely due to the function of certain schemas that tended to produce consistent bias and to make cognitive errors in certain situations.

When applied these concepts to psychopathology, Beck et al. (1990) had noted:

“In the field of psychopathology, the term “schema” has been applied to structures with a highly personalized idiosyncratic content that are activated during disorders such as depression, anxiety, panic attacks, and obsessions, and become prepotent ... Thus, in clinical depression, for example, the negative schemas are in ascendancy resulting in a systematic negative bias in the interpretation and recall of experiences as well as in short-term and long-term predictions, whereas the positive schemas become less accessible.”

In addition, each disorder was associated with specific cognitive profile (Beck and Emery, 1985), which was reflected at all levels of cognitive functioning. In depression, the predominant cognitive theme was about personal loss or deprivation, whereas in anxiety states consisted of a fear of physical or psychological harm or danger. This was known as the content-specificity hypothesis (Beck and Emery, 1985; Clark, Beck, and Brown, 1989). At the schematic level, beliefs and attitudes involving negativity toward the self, the world, and the future, as well as loss within the personal domains were evident in depression. On the other hand, maladaptive schemas dealing with physical or psychological threat to the personal domain as well as an increase sense of vulnerability dominated anxiety states. As a result of these schematic differences, a depressed person was biased towards selectively processing negative self-referent information, minimizing or ignoring positive materials and making appraisals about personally relevant events that

were negative, pervasive, global, and absolutistic. Anxious individuals, on the other hand, selectively processed threat and danger clues, overestimated their personal vulnerability, and made negative event appraisals that were tentative, anticipatory, and specific to the fear situation (Beck and Clark, 1988).

Similar concepts on psychopathology were proposed by Young (Schema-focused therapy; Young, 1990, 1994). Through clinical observation and experiences with patients receiving long term psychotherapy who were difficult to treat, Young (1990) identified a subset of schemas, known as early maladaptive schemas (EMSs) (i.e., dysfunctional schemas). Similar to Beck, he also conceived schemas as the basic structure of cognition. He defined EMSs as “important beliefs and feelings about oneself and the environment which the individual accepts without question.” He conceived that these schemas were accepted as a prior truths, self-perpetuating, difficult to change, significantly dysfunctional, activated by environmental events, and associated with high levels of affect. EMSs were assumed to function according to three processes (cf. Young and Gluhoski, 1996). They are:

1. Schema maintenance. It referred to cognitive distortions and maladaptive behavior patterns that directly reinforced or perpetuated a schema (e.g., exaggerating information that confirmed the schema, engaging in behaviors that were consistent with the schema). For example, an individual with the Defectiveness schema might tolerate critical friends because she perceived herself as defective.

2. Schema avoidance. It referred to the cognitive, behavioral, or emotional strategies by which the individual attempted to avoid triggering a schema and the related intense affect (e.g., distracting oneself from thinking about schema-related issues or avoiding situations

likely to trigger the schema). A range of strategies to stop this from happening that included cognitive avoidance (attempted to avoid thinking about the content of a schema), affective avoidance (blocking the emotional response to schema materials), and behavioral avoidance (avoiding situations or activities that might trigger the schema). For example, a patient with the Failure schema might avoid working on a project because he believed that it would be poorly evaluated. By doing so, he made it likely that he would obtain a negative evaluation, thus reinforcing the schema (self-fulfilling prophecy).

3. Schema compensation. It referred to behaviors or cognitions that overcompensated for a schema; they appeared to be the opposite of what one would expect from knowledge of their early schemas. Schema compensations represented early attempts by the child to redress and cope with the pain of early mistreatment by parents, siblings, or peers. However, when extended into adulthood, schema compensations might become too extreme to be functional in a healthier environment and thus overshoot the mark. Overcompensation ultimately backfired and served to maintain the schema. For example, an individual with the Emotional Deprivation schema who demanded excessive amounts of attention might, in fact, alienated others and ultimately felt even more deprived.

Since schema was a stable structure, the threat of schematic change was too disruptive to the core cognitive organization and hence a variety of cognitive and behavioral maneuvers (schema processes) reinforced the schema (Young and Gluhoski, 1996). When triggered, maladaptive schemas generated high levels of

affect in the individual and led directly or indirectly to a variety of psychological problems such as depression or panic; feelings of loneliness or destructive relationships; inadequate work performance; addictions like alcohol, drugs, or overeating; or psychosomatic disorders like ulcers or insomnia.

Young (1990) originally proposed 16 maladaptive schemas and he had outlined specific cognitive, behavioral, experiential, and interpersonal strategies for each of them. In one recent study, Schmidt et al. (Schmidt, Joiner, Young, and Telch, 1995) had investigated these 16 schemas as identified by Young by using the Schema Questionnaire (Young and Brown, 1990) in clinical and students samples. Twelve hypothesized constructs emerged in the factor analysis and the factor structure of the questionnaire was found to offer considerable support for the construct validity of most of the schemas Young hypothesized. Recently, Young revised his conception on schemas, which eventually developed into 18 schemas (cf. Young and Gluhoski, 1996). (See Appendix I for detailed descriptions of these 18 schemas).

Hence, several defining characteristics of schemas can be noted from Beck's (Beck, 1967, 1976; Beck et al., 1979) and Young's theories (1990, 1994). First, both of them conceived cognitive schemas as core structure of information processing in an individual. Furthermore, they both defined schemas as broad, stable, and persistent. Schemas are essentially implicit, unconditional themes held by individuals. They are perceived to be indisputable and are taken for granted. Furthermore, schemas serve as a template to process later experiences and, as a result, become elaborated throughout one's life and define an individual's behaviors, thoughts, feelings and relationships with other people. Maladaptive schemas are elaborated and maintained by one's distorted thinking and dysfunctional behaviors.

Cognitive Styles and Psychopathology

Though maladaptive schemas are regarded as the core structure of psychopathology (e.g., Beck et al., 1979; Young, 1990, 1994), empirical research about their association or relationship is limited. Most of the past research is focused on investigating and examining the role of negative cognitions on depression. This is not surprising since negative cognitions are first proposed to be a main feature found in depressed patients. Regarding the research on youths, depressed youths were reported to possess a negative self-schema (Zupan, Hammer, and Jaenicke, 1987), a negative view of the world (Kaslow, Stark, Printz, Livingston, and Tsoi, 1992), and negative expectations for the future (e.g., Kazdin, Rodgers, and Colbus, 1986). These disturbances were associated with negatively biased information processing (e.g., Haley, Fine, Marriage, Moretti, and Freeman, 1985) and appeared to produce a distortion in information processing (Kendall, Stark, and Adam, 1990).

Furthermore, in line with the content specificity hypothesis (Beck and Emery, 1985), depressed persons hold schemas involving loss within the personal domain, whereas anxious persons hold beliefs involving physical or psychological threat to the personal domain as well as an increased sense of vulnerability (e.g., Clark et al., 1989). More specifically, Schmidt et al. (1995), using stepwise regression analyses, found that depression was predicted by Dependency and Defectiveness schemas, while anxiety was predicted by Vulnerability, Incompetence / Inferiority, and Emotional Inhibition schemas. No other research about the types of cognitive schemas that hold in different psychological disorders was found besides this one.

Schemas Development

If schemas serve as a template to process one's experience and elaborate

throughout one's lifetime, the next question is: "What is / are the origins of them?"

Beck and Young postulated that schemas developed and formed during childhood. They stated that a "child learns to construe reality through his or her early experiences with the environment, especially with significant others. Sometimes, these early experiences lead children to accept attitudes and beliefs that will later be proved maladaptive" (Beck and Young, 1985).

Normally, most healthy children were able to incorporate both positive and negative events and adopted a balanced, stable view of themselves and others. However, affected by their childhood experience or caused by their genetic predisposition, some of them would tend to develop some dysfunctional (or maladaptive) schemas. When children began to develop a negative schema / belief, based on their experiences, they interpreted negative events as broad, global confirmation for their negative schemas. Positive events were either unnoticed, and therefore unprocessed, or distorted so that the schema was not undermined (J. S. Beck, 1995). It was proposed that maladaptive schemas developed as the result of ongoing, dysfunctional experiences with parents or significant caretakers, siblings, and peers during childhood and expanded as children attempt to make sense of their experiences and to avoid further pain. Schemas eventually became elaborated over time into deeply entrenched patterns of distorted thinking and dysfunctional behaviors. They became self-perpetuating and, therefore, were extremely resistant to change. Once in place, the dysfunctional schemas selectively filtered for corroborating experience such that the schemas were extended and elaborated throughout the individual's lifetime (Young, 1994).

Therefore, during childhood, a maladaptive schema is a means for the child to comprehend and manage the environment. In adulthood, the maladaptive schema outlives its limited utility and created anxiety and / or depression when it was activated by

situation relevant to or somewhat similar to the schema. For example, children who receive no nurturance, empathy, or protection from their parents may develop the Emotional Deprivation schema. As adults, such individuals may hold exaggerated beliefs that they are not being cared for and understood by others. They may feel lonely and empty, and may behave extremely reliant on others. This schema may be triggered by an event such as not being invited for a party, which lead them to feel lonely and depressed. An adult who is being abandoned and rejected during childhood may develop the Abandonment schema, which may be activated during real or perceived separation. It may be triggered by event such as his wife goes out of town to attend a business meeting. An adult with the Defectiveness schemas may continue to feel flawed and defective despite being told repeatedly that she is lovable.

Young hypothesized five domains that are relevant on defining schemas' origins. Each domain reflected a core need of children for adaptive psychological growth, and each of the given domains was believed to interfere with a core need in childhood (cf. Young and Gluhoski, 1996). These five domains are:

1. Disconnection and Rejection. The disconnection and rejection domain reflected a lack of nurturance and safety in the early environment. As adults, these individuals expected that their need for stability, love, and acceptance would not be met.
2. Impaired Autonomy and Performance. Individuals in the impaired autonomy and performance domain were raised in enmeshed or overprotective environments that did not support the child's independence. These individuals did not believe that they could cope adequately and were excessively reliant on others.
3. Impaired Limits. Children raised in over-permissive families or

who were taught a sense of superiority show impaired limits. As

adults, they had a sense of entitlement, difficulty with self-discipline,

and an impaired ability to consider the needs and rights of others.

4. Other-Directedness. The other-directedness domain developed

when children were taught to focus excessively on the desires, feelings,

and responses of others, at the expense of their own needs. The

parents' needs were viewed as more important than the child's needs.

In adult relationships, these individuals focused on satisfying others, or

gaining acceptance, while their needs would not be met.

5. Overvigilance and Inhibition. People in the overvigilance and

inhibition domain had a family context of perfectionism and rigid rules.

Such adults were overly controlled and had unrealistic standards that

interfered with meaningful relationships.

These domains imply that the origins of schemas are affected by family

environment, such as how parents rear their children (i.e., parenting styles), that may make

lasting impressions on individuals and result in schemas development. Liese and Franz

also pointed out that early in children's developmental period, they sought to make sense

of themselves and their world. They developed schemas, or cognitive structures, to

organize the massive amount of data they were constantly receiving (Liese and Franz,

1996). Actually, research generally supported that family was the most critical factor

influencing a person's development, including his or her schemas / cognitive structures

(e.g., Beck et al., 1979; Freeman, 1986; Stark, Rouse, and Livingstone, 1991). More

specifically, research had consistently indicated and supported that childhood experiences

were strongly shaped and influenced by parents. Parenting style (or patterns of parent-

child interaction / parental behavior) was a significant contributor and factor to the

development of psychopathology and cognitive structures (e.g., Perris, 1994; Richter, 1994; Rapee, 1997). In view of these findings, a study of parenting styles will benefit us to understand the development of schemas as well as psychopathology.

Parenting Styles

Actually, the quality of parenting has been a central of most child development theories (e.g., Perris, 1994). Poor parenting has been considered to be a risk factor for the development of psychopathology throughout the history of child psychiatry.

According to Baumrind's (1971, 1989, 1991) widely used typology, parenting styles could be seen as varying along two orthogonal dimensions of demandingness and responsiveness. When crossed, these two dimensions yielded four parenting styles: authoritative parents; who were both responsive and demanding; authoritarian parents who were demanding but not responsive; permissive (or indulgent) parents who were responsive but not demanding; and rejecting-neglecting (or neglectful) parents, who were disengaged and neither demanding nor responsive. Herman et al. (Herman, Dornbusch, Herron, and Herting, 1997) had reviewed the dimensions of parenting styles of parent / adolescent relationships. They had further pointed out that the authoritarian parenting styles typically had emphasized control, but it encompassed both high levels of behavioral control and high levels of psychological control of children.

Parenting Styles and Cognitive Styles

Though the importance of parenting styles in childhood development is widely investigated, research about its relationship with the developing of cognitive schemas is scarce. The available findings suggested that maladaptive communications between parent and child had been implicated in the development of depressogenic cognitive

processes (Beck, 1967; Freeman, 1986; Stark, Humphrey, Laurent, Livingston, and Christopher, 1993). Jaenicke et al. (Jaenicke, Hammen, Zupan, Hiroto, Adrian, and Burge, 1987) found mothers' verbal criticism of their children and their children's tendency to make self-blaming attributed for negative events. This findings suggested that negative verbal communications or messages from parents to children were related to the development of children's maladaptive information processing.

Furthermore, Perris et al. (Perris, Eisemann, Lindgren, Richter, and Vrasti, 1990) and Whisman and Kwon (1992) had shown a positive correlation between parental rejection and high scores on the Dysfunctional Attitudes Scale (DAS, which is assumed to measure the basic dysfunctional assumptions postulated by Beck; Weissman and Beck, 1978), indicating the more rejecting the parents were, the more negative beliefs the children had.

In a more detailed analysis of the associations between dysfunctional self-schemas and perceived parental rearing patterns in depressed adult inpatients ($n = 212$), Richter and his colleagues found rearing patterns such as rejection and overprotection by both parents were related with dysfunctional attitudes (using the EMBU questionnaire [Egna Minnen Beträffande Uppfostran] and the DAS). They concluded that these parental rearing behaviors enhanced the development of dysfunctional attitudes as an important part of the self-image. Furthermore, they found that lack of emotional warmth (i.e., lack of tolerance, affection, stimulation) exerted a similar effect. This association remained constant even with the confounding factors, such as age and severity of depression, were taken into account (cf. Richter, 1994).

Parenting Styles and Psychopathology

Although few investigations have examined the role of parenting in the formation

of cognitive schemas, there is plentiful research on investigating the associations between different types of parenting styles and different types of psychopathology. A brief review of these studies among depression, anxiety and aggression is listed below.

Depression and Related Parenting Styles

Several studies had examined the role of parenting in the development of depression. The result from a number of empirical studies (e.g., Gotlib, Mount, Cordy, and Whiffer, 1988; Parker, 1979, 1983; Parker, Tupling, and Brown, 1979) confirmed that low parental care and, to a lesser degree, parental overprotection were associated with depression and might therefore serve as promising risk factors for the development of depression (e.g., Burbach and Borduin, 1986; Gerlsma, Emmelkamp, and Arrindell, 1990; Parker, 1983).

Richter (1994) reviewed a number of research and he concluded that there were a lot of evidences existed for the importance of parent-child relations for the development of depressive disorders in adulthood. Compared to control subjects, depressed adults frequently perceived both parents as having been more rejecting, more overprotective (Crook, Raskin, and Eliot, 1981; Gerlsma, Das, and Emmelkamp, 1993) as well as less emotionally warm (Perris, Maj, Perris, and Eisemann, 1985; Perris, Arrindell, Perris, Eisemann, van der Ende, and von Knorring, 1986). Deprivation of love during childhood or less maternal affection were suggested to represent an important psychosocial risk factor in the background of adult depressive disorders (e.g., Gerlsma et al., 1990).

Moreover, a wide range of dimensions of parenting appeared to be relevant to depression, such as lack of warmth or caring, lack of acceptance, lack of affection, lack of stimulation, as well as negative control practices, which involved intrusiveness, overprotection, and control through guilt engender, or shame (e.g., Perris, 1994; Rapee,

1997).

Anxiety and Related Parenting Styles

Beckmann, Brähler, and Richter (1983) found that the more rejecting that an individual experienced from the mother, the more the child learnt to withdraw and to self-criticize during childhood, and the more anxious about and dependent from social relations he or she became later in life. Maternal protection seemed to be most consistently related to anxiety, especially for boys, which was found in a longitudinal study (Kagan and Moss, 1962). Hermans et al. (Hermans, ter Laak, and Maes, 1972) found that parents of high anxious children were found to "release tension" in a more negative way and to fail more often than parents of low anxious children to react to expressions of insecurity in the child (i.e., greater rejection). Furthermore, Krohne and Hock (1991) suggested that anxious children would have mothers who were more restrictive (controlling) in their interactions. Overall, research consistently indicated that parents of anxious child tended to adopt controlling, rejecting, and overprotective parenting styles.

Aggression and Related Parenting Styles

On the other hand, other dysfunctional rearing practices, especially those defined as hostile, punitive, shaming, rejecting or overcontrolling, were found to be significantly related to the development of different personality patterns of aggression (e.g., Jacobsson, Lindstrom, von Knorring, Perris and Perris, 1980). Mainly, two components of parenting had been identified as important in adolescents' aggression: monitoring (i.e., the extent to which a parent knew where an adolescent was and what she or he was doing) and positive communication / interaction (e.g., the extent to which a parent and adolescent listened to what each other was saying) (cf. Forehand, Miller, Dutra, and Chance, 1997). For example, poor parent-adolescent communication (i.e., poor parent-child relationship) had

been linked to more delinquency (Henggeler, McKee, Borduin, 1989) and general deviance (Stewart and Zaenglein-Senger, 1984), whereas higher levels of monitoring had been associated with lower levels of adolescent deviance (e.g., Lamborn, Dornbusch, and Steinberg, 1996). As well, corporal punishment was found correlated positively and significantly with early externalizing problem of the children (Wolfe, 1987).

Parenting Styles, Cognitive styles and Psychopathology

Above findings indicated that psychopathology was related to dysfunctional cognitive styles as well as parenting styles. However, so far there is no research in addressing the link between psychopathology, parenting styles and cognitive schemas, especially in child or adolescent. Theoretically, Perris had proposed a framework for linking together the experience of dysfunctional parental rearing and psychopathology later in life (cf. Perris, 1994). He had introduced a multifactorial, interactive framework in explaining the relationship between parental rearing practices, dysfunctional cognitive schemas and the development of psychopathology. According to this framework, vulnerability to psychopathological disorders was determined both by the multiple biological characteristics of an individual and by the occurrence of dysfunctional self-schemas, which were assumed to be largely contributed by dysfunctional parental rearing practices. However, little research has been conducted to examine the validity of Perris's multifactorial model.

The purpose of present study

In view of there was a general lack of research in examining the link between parenting styles, cognitive schemas and psychopathology, the present study was designed to evaluate their relationships. Focus was only put on depression, anxiety and aggression.

A mediational model was proposed. One of the major goals in this study was attempted to clarify and examine the differential mediating roles of cognitive schemas in the relationship between parenting styles and different types of psychopathology. It was hypothesized that maladaptive cognitive schemas acted as the mediators between parenting styles and different types of psychopathology. In other words, it was assumed dysfunctional parenting styles led to psychopathology with the co-existence of maladaptive schemas. Parenting styles were supposed to associate with the formation of cognitive schemas. Furthermore, it was hypothesized that different disorders were characterized by different maladaptive schemas (i.e., the content-specificity hypothesis) and parenting styles.

To examine the mediational role of maladaptive cognitive schemas among perceived parenting styles and different types of psychopathology, several statistical analyses have to be conducted. According to Baron and Kenny (1986), in order to test for a mediational model in this study, the following conditions were required: (1) Perceived parenting styles are correlated with psychopathology, (2) cognitive schemas must correlate with psychopathology, (3) parenting styles must correlate with cognitive schemas, (4) the previously significant association between parenting styles and psychopathology must be eliminated or substantially reduced when cognitive schemas were controlled, and (5) the relationship between cognitive schemas and psychopathology must remain significant when perceived parenting styles were controlled.

Since past research on investigating cognitive schemas was mainly focused on adults (e.g., Schmidt et al., 1995), and it had been suggested that negative cognitive styles were not found until late childhood (i.e., after grade eighth) (e.g., Cole and Turner, 1993), hence, present study targeted on using adolescents as participants.

CHAPTER II

Methodology

Participants

Pilot Study

To examine the psychometric properties of the instruments used in this study, a pilot study was conducted. Sixty-seven Chinese Form Four students (34 boys, 33 girls) from a local secondary school were recruited. Their age ranged from 13 to 15. The tests were administered to two classes under the supervision of teachers who were thoroughly briefed before the data were collected. The instruments used in this study was a self-reported questionnaires which was presented in Chinese. Participants were informed that this study aimed at collecting information on their perceived parenting styles. Time for completing the questionnaires took approximately 25 minutes. Three collected questionnaires were discarded owing to incompleteness. Preliminary analyses, such as the factor structure and internal consistency check, showed that nearly all subscales of the instruments had reasonable psychometric properties. The distribution of each item was examined as well. Since some items were either too skewed or did not load on any factors, they were modified. The instruments used in the pilot study were attached in Appendix II.

The present study

A total of 790 Chinese students, including 389 boys and 401 girls from secondary two to four were selected from seven local secondary schools. They ranged in age from 12 to 19, with a mean age of 14.7 ($SD = 1.00$).

Measures

Perceived Parenting Styles

Parenting Scale

A self-report perceived parenting scale was constructed for use in this study with Chinese adolescents in Hong Kong. Relevant measures from the literature were consulted (e.g., Children's Reports of Parental Behavior Inventory: Schaefer, 1965; Egna Minnen Beträffande Uppfostran [My upbringing memories]: Perris, Jacobsson, Lindstrom, von Knorring, and Perris, 1980; Young Parenting Inventory: Young, 1994). 14 parenting styles were hypothesized: Parental Involvement (e.g., "My parents spend time taking to me"), Emotional Warmth (e.g., "My parents are warm and tender"), Parental Guidance (e.g., "My parents guide me on my homework"), Autonomous Grant (e.g., My parents allow me to decide my things"), Rejection (e.g., "My parents always criticize me"), Neglect (e.g., "My parents seldom talk to me"), Over-protection (e.g., "My parents do most of the things for me"), Dependency (e.g., "My parents make me felt unable to make decision"), Psychological Control (e.g., "My parents refuse to talk to me if I made them unhappy), Lax Control (e.g., "My parents seldom concern about my behaviors"), Punishment (e.g., "My parents beat me without reasons"), Coercion (e.g., "Doing things without my parents' approval is not allowed"), Inconsistency (e.g., "My parents have inconsistent demands and regulations on me"), and Over-demand (e.g., "My parents want me to do my best all the time").

The perceived parenting scale is a self-reported measure with a four-point Likert scale (from "strongly agree" (1) to "strongly disagree"(4)). Present study did not require participants to recall their parents' parental behaviors during childhood, but what they perceived at the moment of testing, since retrospective data often might have been influenced by recall biases (Gerlsma, et al., 1990). Adolescents' self-report but not

parents' report were considered in this study, since it was the adolescents' perception of the nature of the interaction which was most important, regardless of how the parents actually treated their children (Nuttall and Nuttall, 1976). Results from the pilot study generally showed good internal consistency within each subscale. Items that had very low correlation with the construed subscales were modified such as changed the words. The final version of the parenting scale contained 76 items. A sample of this questionnaire is supplied in Appendix III.

Cognitive Schemas

The Schema Questionnaire – short form (SQ, Young and Brown, revised 1994)

The SQ – short form is a 75-item self-report inventory designed to measure 16 EMSs (described above), which was derived from the long form (205-item) (second edition; Young and Brown, 1990). Items for the SQ were generated by its author and other practicing therapists based upon clinical experience with chronic and / or difficult psychotherapy patients. Participants rated each item on how accurately the statements described them, using a 6-point scale (1 = completely untrue of me, 2 = mostly untrue of me, 3 = slightly more true than untrue, 4 = moderately true of me, 5 = mostly true of me, 6 = describes me perfectly).

Schmidt et al. (1995) had examined the factor structure of the long form of the SQ in student and clinical samples. Factor analyses using the student sample revealed 13 primary schemas; 12 of them were similar to those hypothesized by Young. A new factor "Fear of Losing Control", which consisted of 3 items: "I worry that I might seriously harm someone physically or emotionally if my anger gets out of control", "I feel that I must control my emotions or impulses or something bad is likely to happen", and "I worry about losing control of my actions" emerged in their study. Of the four factors

hypothesized by Young which did not emerge from the analyses, each merged into other factors with conceptual similarities. More specifically, items of Social Undesirability schema loaded onto Defectiveness schema; items of Social Isolation / Alienation schema loaded onto Emotional Deprivation schema; items of Subjugation schema loaded onto Dependency schema; items of Entitlement schema loaded on Insufficient Self-Control schema. The new extracted factor "Fear of Losing Control" was consistently emerged in two samples. Regarding the results found in Schmidt et al.'s study, only the 12 empirically supported constructs were used in this study. The new extracted factor "Fear of Losing Control" was also included. Therefore, a total of 13 constructs were used. The final version of the questionnaire used in this study consisted of 63 items (see Appendix IV).

Anxiety

State-Trait Anxiety Inventory – State (STAI-S; Spielberger, Gorsuch, Lushene, Vagg, and Jacobs, 1983).

The STAI consists of two scales developed to provide operational measures of state and trait anxiety. STAI – State scale is used in the present study so as to measure the current level of anxiety symptomatology. The original scale contains 20 items. For each item, participants indicated how frequently they have experienced that symptom on a 4-point Likert scale ranging from rarely or none of the time (1) to most or all of the time (4). High STAI-S scores reflected more anxiety symptoms. The scale showed satisfactory internal consistency ($\alpha = .92$) (Spielberger et al., 1983).

Research findings consistently reported two factors -- symptom-negative and symptom-positive -- in the A-state scale (Kendall and Finch, 1976; Watson, Clark, and Tellegen, 1988; Shek, 1991). While negatively worded items tap mood states

traditionally associated with anxiety, the positively worded items, such as feeling joyful, pleasant are regarded as more nonspecific. Thus, only ten negatively worded items were used in the present study in order to increase the discriminate validity and to minimize its overlap with depression measures (cf. Lo, 1994) (see Appendix V).

Depression

Depression Self-Rating Scale (Birlleson, 1981)

A self-report of depressed mood was obtained using the Depression Self-Rating Scale (DSRS), which was originally derived by identifying items that differentiated depressed from non-depressed children in Birlleson's (1981) sample of British children aged 7 to 13 years. Once again, only items phrased negatively were used (i.e., endorsement indicates the presence of depressive symptoms, e.g., "I want to cry"), which constituted of 11 items (see Appendix VI). Each participant was asked to rate the severity of "Never"(1) to "Most of the time"(4) for each symptom in a four-point scale. Total depression scores were calculated by summing the participant's scores on the 11 items. Possible scores range from 4 to 44, with higher scores indicating a greater level of severity of depressive symptom.

The Chinese version of the DSRS was found to have moderately high internal consistency, with Cronbach's alpha being .75 (BGCA, 1992) for the original 18-item version.

Aggression

Youth Self-Report (YSR, Achenbach, 1991) – Aggressive Behavior subscale

The YSR was a self-report symptom checklist filled out by youths between age of 11 to 18. It was designed for establishing an empirically based classification system of

child and adolescent psychopathology. The original version of this questionnaire consisted of 8 subscales, namely, Withdrawn, Somatic Complaints, Anxious / Depressed, Social Problems, Thought Problems, Attention Problems, Delinquent Behavior, and Aggressive Behavior. Only Aggressive Behavior subscale was used in the present study, which composed of 19-item in a 3-point scale. A sample of this questionnaire is attached in Appendix VII.

Procedure

The tests were administered in classes of about 40 students under the supervision of teachers who were thoroughly briefed before the data were collected. All the above self-reported questionnaires were presented in Chinese. Participants were informed that this study aimed at collecting information on their perceived parenting styles. Time for completing the questionnaire took approximately 25 minutes.

Parenting Scale

The originally hypothesized construct was composed of 14 parenting styles, which were: "Involvement", "Emotional Warmth", "Physical Warmth", "Psychological Control", "Inconsistency", "Punishment", "Terror", "Hostility", "Rejection", "Isolation", "Coercion", "Psychological Control", "Love Restriction", "Overprotection", and "Neglect" (refer to the Methodology section for details of the original questionnaire).

Factor analysis of the parenting scale extracted 4 factors, factor 1 explained 32.4% of the total variance, factor 2 explained 12.4%, factor 3 explained 5.4%, and factor 4 explained 2.2% of the total variance. Items, whereas factor 13 and 14 did not have significant factor loadings, were eventually discarded. Factor loadings of the retained items are presented in Table 1.

The remaining ten factors were labeled as "Child's Self-Perception", "Parenting Styles",

Results

Preliminary Analysis

Factor analysis

Separate factors analyses were conducted for the revised parenting scale and the revised Schema Questionnaire (SQ). Only factors with eigenvalues above one were retained. Maximum Likelihood (ML) extraction with varimax rotation was performed for a sample of 790 adolescents. Missing cases were deleted listwise. Items loading at 0.4 or above to a factor were assigned to that factor. A more stringent criterion of $\geq .40$ factor loading was preferred because only variables with loadings of .40 or greater (i.e., the variable at least had 15 % of share variance with the construct) were meaningful for interpretation purposes (e.g., Stevens, 1996). Furthermore, ML instead of PCA (Principle Component Analysis) was used, as ML summarized the data by assuming the existence of hypothetical factors, whereas PCA did not have this assumption.

Parenting Scale

The originally hypothesized parenting scale contained 14 parenting styles, they were: "Involvement", "Emotional Warmth", "Parental Guidance", "Autonomous Grant", "Inconsistency", "Punishment", "Rejection", "Overprotection", "Dependency", "Coercion", "Psychological Control", "Lax Control", "Over-demand", and "Neglect" (refer to the Methodology session for details of the original parenting scale).

Factor analysis of the parenting scale extracted a fourteen-factor solution, explaining 52.4% of the total variance. Since factors 11 and 12 only composed of two items, whereas factor 13 and 14 did not have significant factor loadings, they were eventually discarded. Factor loadings of the remaining items are reported in Table 1.

The remaining ten factors included the 13 originally hypothesized parenting styles,

with one extracted factor composed of three hypothesized parenting styles (i.e., “Involvement”, “Emotional Warmth” and “Parental guidance”). It was termed “Parental Warmth / Support”, which contained items involving parental concern about child’s activities, parental care and support, and parental encouragement and guidance on their children behaviors (e.g., ‘My parents engaged themselves in my interests and hobbies’, ‘My parents praised me’ and ‘If I had a difficult task in front of me, my parents will give opinions and guidance to me.’). “Psychological Control” could not be extracted from the present factor analysis.

The other nine parenting factors were “Inconsistency” (e.g., ‘My parents change their demands and attitudes on me without reasons’), “Rejection” (e.g., ‘My parents always criticize me’), “Coercion” (e.g., ‘My parents do not allow me to do things without their approval’), “Over-demand” (e.g., ‘My parents want me to do my best all the time’), “Lax Control” (e.g., ‘My parents do not require me to bear my responsibility’), “Overprotection” (e.g., ‘My parents over-protected me’), “Punishment” (e.g., ‘My parents beat me with belt or other objects’), “Autonomous Grant” (e.g., ‘My parents let me plan my things’) and “Neglect” (e.g., ‘My parents seldom talk to me’). The contents of five obtained factors were exactly identical to the hypothesized (i.e., Inconsistency, Lax Control, Punishment, Neglect, and Rejection). Regarding the conceptual similarity between the hypothesized constructs and the empirical-derived constructs, the empirical-derived factors were assigned with the same name as the hypothesized ones, except Parental Warmth / Support. Item description of each factor is provided in Table 1. The ten factor-derived parenting subscales explained 49% of the total variance.

Table 1
Results of Factor Analysis on the Parenting Scale

Item abbreviation	Factors									
	1	2	3	4	5	6	7	8	9	10
Factor 1 (Parental Support/Warmth)										
Treat me with warmth and tenderness	.78									
Comfort and encourage me	.72									
Support me	.71									
Are friendly towards me	.71									
Maintain close relation with me	.69									
Spend time talking to me	.69									
Give me suggestion	.69									
Provide opinion and guidance to me	.69									
Concern about my behaviors	.67									
Give me objective opinion and direction	.66									
Show they liked me behaviorally	.65									
Praise me	.63									
Accompany me	.62									
Play or join activities with me	.61									
Explain my fault to me	.61									
Guide me on my homework	.55									
Interested in my things / activities	.55									
Allow me to decide my things	.47									
Factor 2 (Inconsistency)										
Have inconsistent demands and regulations		.77								
Have inconsistent demands among themselves		.72								

(.42)

Table Continues

	1	2	3	4	5	6	7	8	9	10
Change requirements on me according to their feelings		.69								
Change demands and attitudes on me without reasons		.60								
Have inconsistent opinions among themselves		.59								
Always change supervision methods		.57								
Factors 3 (Overprotection)										
Treat me as a child			.69							
Do most of the things for me			.68							
Overprotected me			.58							
Over-concern about whether I will sick			.58							
Think that I cannot take care of myself			.53							
Not allow me to do things as the other child			.50							
Make me felt unable to make decision			.41							
Factor 4 (Rejection)										
Reject me				.62						
Do not want me				.60						
Always criticize me				.57						
Neglect my feelings				.56						
I am the scapegoat of the family				.55						
Scold me in front of others				.52						
Like my siblings more				.51						
Factor 5 (Coercion)										
Doing things without their approval is not allow					.66					

	1	2	3	4	5	6	7	8	9	10
Do not allow me making errors					.63					
I have to get my parents' approval					.61					
I must follow parent's instructions					.59					
Refuse to talk to me if I made them unhappy					.45					
Warn me that I must study hard					.42					
Factor 6 (Over-demand)										
Demand the best						.71				
Want me to do my best all the time						.63				
Emphasize success and competition						.63				
Force me to pay all the efforts						.60				
Make me felt not good enough						.50				
Factor 7 (Lax Control)										
Will not stop me even I am wrong							.67			
Only need me to follow a few regulations							.65			
Seldom concern about my behaviors							.61			
I can go out if I wish							.61			
Never require me to bear my responsibility							.41			
Factor 8 (Punishment)										
Beat me with belt or other objects								.76		
Beat me with their hands								.62		
Beat me without reasons								.59		
Punish me more than I deserved								.58		

Table Continues

	1	2	3	4	5	6	7	8	9	10
Factor 9 (Autonomous Grant)										
Let me do the thing if it is reasonable									.67	
Let me make my own decisions									.58	
Let me have enough freedom	(.41)								.51	
Let me plan my things	(.47)								.47	
Factor 10 (Neglect)										
Seldom talk to me	(-.44)									.58
Do not understand me	(-.41)									.53
Are emotionally cold										.53
Unconcern about me	(-.42)									.50
% of Variance	23.2	9.4	3.4	2.8	2.7	2.0	1.7	1.5	1.3	1.0

Note. N = 790. Missing data was deleted listwise.

Schema Questionnaire

Similar factor analysis procedure and method was performed on the SQ.

Compared with Schmidt et al's (1995) study, the present procedure of statistical analysis was slightly different from theirs. In this study, item was retained only when it had a $\geq .40$ factor loading, whereas Schmidt et al used $\geq .30$ as their cut-off point for item selection. Statistical procedure ML, instead of PCA, was used in the present analysis.

Item 55 was excluded for the present analysis since 16.7% of data was missing. Factor analysis of the SQ originally generated a fourteen-factor solution, explaining 54.3% of the total variance. Since factors 13 and 14 only composed of two items, they were discarded. Table 2 presents the factor loadings of the remaining items.

Of those 13 factors used in this study, 12 were replicated, accounting for 52% of the total variance. "Defectiveness" was the only factor that did not emerge. Two of the five items belonging to the "Defectiveness" factor loaded onto one single factors, while the other three items had no significant factor loadings. The composition of the remaining 12 factors were largely resembled the subscales extracted in Schmidt et al's (1995) study. These twelve factors were: "Dependency", "Incompetence/Inferiority", "Emotional Deprivation", "Abandonment", "Mistrust", "Emotional Inhibition", "Self-Sacrifice", "Unrelenting Standards", "Insufficient Self-Control", "Vulnerability", "Enmeshment" and "Fear of Losing Control". Actually, the composition of 9 out of 12 subscales derived in this study were identical to the subscales originally used (including Incompetence / Inferiority, Emotional Deprivation, Abandonment, Mistrust, Emotional Inhibition, Self-Sacrifice, Unrelenting Standards, Insufficient Self-Control and Fear of Losing Control subscales). Given that the empirical-derived factors were highly

resembled the original constructs, they were named the same.

Table 2
Results of Factor Analysis of the Schema Questionnaire

Item abbreviation	1	2	3	4	5	6	7	8	9	10	11
Factor 1 (Dependency)											
Cannot rely on own judgment	.75										
Dependent	.67										
Lack motivation to rise	.64										
Not capable of getting by one's life	.54										
Not confident about own ability	.53										
Unable to converse with parents	.51										
Factor 2 (Incompetence/Infirmity)											
Not as talented as other people think		.85									
Most other people are more capable than I		.76									
Not as intelligent as most people think		.72									
Incompetent to make decisions		.70									
Feeling that I am a rather weak person		.64									
Factor 3 (Lack of motivation/Depression)											
Lack of motivation to get on with life			.74								
Feeling that I am a rather weak person			.71								
Lack of motivation to get on with life			.68								
Feeling that I am a rather weak person			.64								
Feeling that I am a rather weak person			.61								
Factor 4 (Lack of motivation/Depression)											
Feeling that I am a rather weak person				.81							
Feeling that I am a rather weak person				.78							
Feeling that I am a rather weak person				.75							
Feeling that I am a rather weak person				.72							
Feeling that I am a rather weak person				.69							

Table 2
Results of Factor Analysis of the Schema Questionnaire

Item abbreviation	1	2	3	4	5	6	7	8	9	10	11	12
Factor 1 (Dependency)												
Cannot reply on own judgment	.75											
Dependent	.69											
Lack common sense	.64											
Not capable of getting by one's life	.64											
Not confident about own ability	.63											
Unable to separate with parents	.51											
Factor 2 (Incompetence/Inferiority)												
Not as talented as most people (work)		.80										
Most other people are more capable than me		.76										
Not as intelligent as most people (school)		.75										
Incompetent to make achievement		.70										
Nothing was as good as other people can do		.63										
Factor 3 (Emotional Deprivation)												
Lack of warmth, holding and affection			.75									
Has no one to nurture			.71									
Lack of someone who understand him/her			.68									
No one there to give advice			.62									
Do not feel special to someone			.56									
Factor 4 (Abandonment)												
Close people will leave me or abandon me				.81								
	1	2	3	4	5	6	7	8	9	10	11	12

Worry about losing some people
Extremely worried about people leaving me
Get desperate if someone I care pulling away
Clinging to people I'm close

.74
.69
.63
.58

Factor 5 (Mistrust)

Suspicious of other people's motives
Lookout for people's ulterior motives
People will intentionally hurt me
Someone will betray me
People will take advantage of me

.77
.67
.61
.59
.52

Factor 6 (Emotional Inhibition)

Felt embarrassing to express feelings
Find it hard to be warm and spontaneous
Too self-conscious to show positive feelings
People think I am unemotional
People see me as uptight emotionally

.75
.69
.63
.50
.41

Factor 7 (Self-Sacrifice)

Busy doing for people
Think of others more than of myself
Doing too much for others

.76
.66
.59

Usually taking care of people
Always listen to everyone else's problems

.57
.55

Table Continues

	1	2	3	4	5	6	7	8	9	10	11	12
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Factor 8 (Unrelenting Standards)

I must control my emotions or impulses
Worry about losing control of my actions

.67
.65

% of Variance	21.2	4.8	4.1	4.1	3.1	2.9	2.5	2.6	2.1	1.9	1.5	1.4
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Note. N = 790. Missing data was deleted listwise.

Means, Standard Deviations and Internal Consistency of the Instruments

The means and standard deviations of the parenting scale, SQ and measures of three types of psychopathology are displayed in Table 3.

The internal consistency reliability coefficients (Cronbach's alphas) for each instrument are also reported in Table 3. Good internal consistency was found for all of the subscales. For the parenting scale subscales, alphas ranged from .74 to .94; for the schema subscales, they ranged from .75 to .91. These results were somewhat expected as the parenting and schema subscales were empirically-derived factors.

The alphas for measures on depression (i.e., Depression Self-Rating Scale), anxiety (i.e., State-Trait Anxiety Inventory - State), and aggression (i.e., Youth Self-Report - Aggressive Behavior Subscale) were .91, .90 and .86 respectively.

Attachment	25.8	6.2	.87	.93
Worship	16.02	3.1	.82	.86
Control and inhibition	26.1	5.2	.85	.89
Self-Sacrifice	16.82	3.2	.81	.85
Internalizing Standards	12.93	2.4	.83	.87
Sufficient self-control	17.44	3.2	.84	.88
Vulnerability	15.1	2.8	.82	.86
Emmeshment	14.75	2.9	.83	.87
Fear of Losing Control	11.5	2.1	.84	.88
<u>Psychopathology</u>				
DSRS	19.59	6.4	.91	.92
STAI-S	18.77	6.25	.90	.91
YSR	9.95	2.4	.86	.87

Note. Missing data was deleted listwise. N = 100.

DSRS = Depression Self-Rating Scale; STAI-S = State-Trait Anxiety Inventory - State;
YSR = Youth Self-Report (Aggressive Behavior Subscale).

Table 3.

Means, Standard Deviations and Cronbach's Coefficient Alphas for the Parenting Scale, Schema Questionnaire and Instruments for Three Types of Psychopathology.

Subscale	Mean	Standard Deviation	α	N
<u>Parenting Scale</u>				
Parental Warmth/Support	47.53	9.64	.94	773
Inconsistency	13.91	3.94	.86	782
Overprotection	15.72	4.04	.81	786
Rejection	14.35	4.63	.89	781
Coercion	13.86	3.80	.84	782
Over-demand	12.35	2.86	.80	785
Lax Control	10.18	2.77	.74	785
Punishment	6.94	2.59	.80	786
Autonomous Grant	11.94	2.42	.80	786
Neglect	10.99	3.32	.87	785
<u>Schema Questionnaire</u>				
Dependency	15.84	5.91	.86	783
Incompetence / Inferiority	15.67	5.69	.91	784
Emotional Deprivation	16.30	5.43	.84	782
Abandonment	18.37	5.77	.87	780
Mistrust	16.02	5.21	.82	780
Emotional Inhibition	16.32	4.83	.79	785
Self-Sacrifice	16.85	3.97	.77	787
Unrelenting Standards	12.92	4.09	.80	786
Insufficient Self-Control	17.48	4.35	.75	772
Vulnerability	12.17	4.35	.79	782
Enmeshment	11.25	3.97	.74	784
Fear of Losing Control	10.06	3.61	.80	787
<u>Psychopathology</u>				
DSRS	19.89	6.76	.91	781
STAI-S	19.57	6.10	.90	786
YSR	9.95	6.07	.86	785

Note. Missing data was deleted listwise. N = sample size.

DSRS = Depression Self-Rating Scale; STAI-S = State-Trait Anxiety Inventory – State;
YSR = Youth Self-Report (Aggressive Behavior Subscale).

Inter-correlation Analysis between the Hypothesized Subscales and the Factor-derived Subscales

Parenting Scale

The inter-correlations between the originally hypothesized parenting subscales and the factor derived parenting subscales (i.e., subscales obtained from factor analysis in the current study) are presented in Table 4. Because of the large number of statistical tests performed, a more conservative p-value ($p < .001$) was adopted.

High correlations were found between the originally hypothesized subscales and the present ones. As mentioned above, five empirical subscales actually duplicated the original one (i.e., “Inconsistency”, “Lax Control”, “Punishment”, “Neglect” and “Rejection”), so the correlation is 1.00. For the remaining five factor-derived subscales, they were highly correlated with the hypothesized ones ($r = .88$ to $.98$), indicating they shared a high proportion of similarity, and hence, representing similar constructs. These results provided empirical support for factorial validity of the questionnaire. In the following analysis, the scores of factor-derived subscales will be employed.

Table 4.

Inter-correlation Matrix of Original Parenting Scale and Empirical Parenting Scale

Original Subscales	Empirical Subscales									
	Warmth1	Inconsis2	Overpro3	Reject4	Coercion5	Odemand6	Lax Con7	Punish8	Autogr9	Neglect10
Involvement	.91*	-.30*	-.02	-.46*	-.12	-.02	-.27*	-.24*	.53*	-.57*
Em. Warmth	.93*	-.33*	-.05	-.55*	-.19*	-.08	-.17*	-.29*	.58*	-.56*
Guidance	.88*	-.35	-.09	-.50*	-.21*	-.08	-.18*	-.25*	.49*	-.53*
Autogr	.65*	-.31*	-.24*	-.45*	-.32*	-.16*	-.12	-.33	.98*	-.42*
Inconsistency	-.36*	1.00*	.32*	.52*	.44*	.34*	.24*	.39*	-.30*	.53*
Punishment	-.30*	.39*	.26*	.51*	.47*	.25*	.16*	1.00*	-.32*	.38*
Rejection	-.56*	.52*	.32*	1.00*	.52*	.32*	.28*	.51*	-.43*	.67*
Oprotection	-.05	.28*	.98*	.28*	.48*	.42*	.04	.23*	-.21*	.17*
Coercion	-.20*	.41*	.51*	.51*	.98*	.49*	.07	.47*	-.29*	.34*
Lax Con	-.23*	.24*	.06	.28*	.10	.05	1.00*	.16*	-.12	.35
Odemand	-.03	.33*	.43*	.29*	.49*	.97*	-.05	.24*	.12	.27*
Neglect	-.61*	.53*	.21*	.67*	.37*	.30*	.35*	.38*	-.41*	1.00*

Note. * p < .001. Missing data was deleted listwise. N = 723.

Original Parenting Scale: Em. Warmth = Emotional Warmth; Autogr = Autonomous Grant; Lax Con = Lax Control; Odeman = Over-demand.

Empirical Parenting Scale: Warmth1 = Parental Warmth/Support; Inconsis2 = Inconsistency; Overpro3 = Overprotection; Reject4 = Rejection; Odemand6 = Over-demand; Lax Con7 = Lax Control; Punish8 = Punishment; Autogr9 = Autonomous Grant.

Schema Questionnaire

The correlations between the original SQ subscales and the factor-derived 12 schema subscales in the present study were examined. Results are displayed in Table 5. Similarly, to minimize the possibility of Type I error owing to the large number of correlations performed, a more conservative p-value ($p < .001$) was adopted.

As can be seen from Table 5, high correlations were found between the original subscales and the factor-derived ones. Nine out of the remaining twelve factor-derived subscales exactly replicated the original factors, whereas the correlations of the remaining 3 factors with the original subscales ranged from .97 to .99, indicating they shared a high proportion of common items. Regarding the factorial validity of the questionnaire, in the following analysis, the scores of factor-derived subscales will be employed.

Table 5
Inter-correlation Matrix of Original Schema Questionnaire and Impulsive Factors

Original Subscales	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Factor 1	1.00				
Factor 2	.98	1.00			
Factor 3	.97	.98	1.00		
Factor 4	.99	.99	.99	1.00	
Factor 5	.99	.99	.99	.99	1.00
Factor 6	.99	.99	.99	.99	.99
Factor 7	.99	.99	.99	.99	.99
Factor 8	.99	.99	.99	.99	.99
Factor 9	.99	.99	.99	.99	.99
Factor 10	.99	.99	.99	.99	.99
Factor 11	.99	.99	.99	.99	.99
Factor 12	.99	.99	.99	.99	.99

Table 5.
Inter-correlation Matrix of Original Schema Questionnaire and Empirical Schema Questionnaire

Original Subscale	Empirical Subscales											
	Depen1	Incom2	Em.De3	Aband4	Mistru5	Em.In6	Sacrif7	Stand8	In.Con9	Vuln10	Emne11	L.Con12
Original Subscale												
Em. Deprivation	.21*	.39*	1.00*	.35*	.36*	.33*	.19*	.21*	.37*	.24*	.24*	.29*
Abandonment	.28*	.32*	.35*	1.00*	.31*	.25*	.26*	.27*	.40*	.30*	.30*	.34*
Mistrust	.20*	.22*	.36*	.31*	1.00*	.35*	.22*	.29*	.24*	.46*	.21*	.33*
Incompetence	.51*	1.00*	.39*	.32*	.22*	.33*	.14*	.18*	.42*	.36*	.39*	.24*
Dependency	.99*	.51*	.22*	.29*	.21*	.42*	.16*	.20*	.32*	.38*	.53*	.24*
Vulnerability	.45*	.41*	.28*	.35*	.46*	.41*	.28*	.25*	.34*	.97*	.40*	.33*
Enmeshment	.67*	.41*	.23*	.29*	.20*	.34*	.24*	.25*	.28*	.36*	.98*	.20*
Self-Sacrifice	.16*	.14*	.19*	.26*	.22*	.21*	1.00*	.29*	.23*	.25*	.25*	.18*
Em. Inhibition	.41*	.33*	.33*	.25*	.35*	1.00*	.21*	.25*	.34*	.37*	.32*	.22*
Unrelenting stand	.21*	.18*	.21*	.26*	.29*	.26*	.28*	1.00*	.21*	.25*	.27*	.24*
In. Self-Control	.31*	.42*	.37*	.40*	.24*	.34*	.23*	.23*	1.00*	.31*	.29*	.42*
Fear of Losing Con	.22*	.24*	.29*	.34*	.33*	.22*	.18*	.25*	.42*	.31*	.21*	1.00*

Note. * $p < .001$. Missing data was deleted listwise. N = 582.

Original SQ Subscales: Em. Deprivation = Emotional Deprivation; Incompetence = Incompetence/Inferiority; Em. Inhibition = Emotional Inhibition; Unrelenting stand. = Unrelenting standards; In. Self-Control = Insufficient Self-Control; Fear of Losing Con = Fear of Losing Control.
Empirical SQ Subscales: Depend1 = Dependency; Incom2 = Incompetence/Inferiority; Em. De3 = Emotional Deprivation; Aband4 = Abandonment; Mistru5 = Mistrust; Em. In6 = Emotional Inhibition; Sacrif7 = Self-Sacrifice; Stand8 = Unrelenting standards; In. Con9 = Insufficient Self-Control; Vuln10 = Vulnerability; Emne11 = Enmeshment; L.Con12 = Fear of Losing Control.

Inter-correlation Analysis between Factor-Derived Subscales

Parenting Scale

Table 6 lists the inter-correlations among the ten factor-derived parenting subscales. Most of the subscales were found to be correlated (significant level set at $p < .001$).

Parental warmth / support and Autonomous granting parenting (i.e., authoritative parenting – a constellation of parent attributes that includes emotional support, appropriate autonomy granting; Baumrind, 1989, 1991) was moderately correlated ($r = .61$). As predicted, these two parenting subscales were inversely correlated with other parenting styles. Parental Warmth / Support was relatively more inversely correlated with Rejection ($r = -.55$) and Neglect ($r = -.60$) (i.e., similar to the concept of Neglectful parenting – parents who are simply unavailable to their children, failing to be either involved, controlling, or supportive in self-regulation; Baumrind, 1967, 1991; Steinberg and Darling, 1994)), indicating they were, to a certain extent, two opposite parental behaviors. Rejection was also moderately correlated with Neglect ($r = .67$), Inconsistency ($r = .51$), Coercion ($r = .52$), and Punishment ($r = .50$). Regarding the items compositions of these 5 subscales, they could be grouped under authoritarian parenting (i.e., parents who make high demand on the behavior and performance of the children, enforced by strict, sometimes harsh, discipline; Baumrind, 1967, 1991; Steinberg and Darling, 1994). Nevertheless, the strength of all of the significant correlations was only mild to moderate ($r = .16$ to $.61$), providing support for the separability of these ten subscales.

Table 6.
Inter-correlation Matrix of the Parenting Scale

	1	2	3	4	5	6	7	8	9	10
1. Parental Warmth/Support	----									
2. Inconsistency	-.36*	----								
3. Overprotection	-.07	.32*	----							
4. Rejection	-.55*	.51*	.32*	----						
5. Coercion	-.20*	.43*	.51*	.52*	----					
6. Over-demand	-.07	.34*	.43*	.32*	.50*	----				
7. Lax Control	-.23*	.24*	.06	.28*	.10	-.05	----			
8. Punishment	-.30*	.39*	.27*	.50*	.46*	.25*	.16*	----		
9. Autonomous Grant	.61*	-.30*	-.23*	-.43*	-.29*	-.16*	-.13	-.32*	----	
10. Neglect	-.60*	.52*	.21*	.67*	.36*	.30*	.35*	.37*	-.41*	----

Note. * $p < .001$. Missing data was deleted listwise. $N = 728$.

Schema Questionnaire

Regarding the inter-correlations among the 12 factor-derived schemas subscales (refer to Table 7), several significant correlations were found. The magnitude of the correlations was only mild to moderate (.16 to .54). Though we could not regard these 12 subscales as totally independent from each other, there was some support of their separability.

Dependency schema was moderately correlated with Enmeshment schema ($r = .54$), both were belonged to the Impaired Autonomy and Performance domain according to Young's classification system (Young, revised 1995; also see Appendix I), reflecting the themes of lacking individuation and depending on others to look after his or her needs. Insufficient Self-Control had a relatively higher correlation with Fear of Losing Control ($r = .44$), both reflecting the theme of having difficulty to exercise or restrain sufficient self-control, could be grouped under the Impaired Limits domain. Moderate correlation was found between Vulnerability and Mistrust schemas ($r = .45$), both assessing the theme of fear of being hurt. Incompetence / Inferiority schema appeared to be a relatively more general construct as it correlated moderately with Dependency schema ($r = .50$), Emotional Deprivation ($r = .42$), and Insufficient Self-Control ($r = .42$). On the other hand, pertaining to Abandonment, Emotional Inhibition, Self-Sacrifice, and Unrelenting Standards schemas were relatively more independent as they were only mildly correlated with other subscales ($r = .11$ to $.39$). Overall, all 12 schema subscales were positively correlated.

Table 7.
Inter-correlation Matrix of the Schema Questionnaire.

	1	2	3	4	5	6	7	8	9	10	11	12
1. Dependency	----											
2. Incompetence/Inferiority	.50*	----										
3. Emotional Deprivation	.22*	.42*	----									
4. Abandonment	.29*	.31*	.35*	----								
5. Mistrust	.22*	.21*	.35*	.28*	----							
6. Emotional Inhibition	.39*	.32*	.35*	.26*	.36*	----						
7. Self-Sacrifice	.12	.11	.18*	.25*	.18*	.19*	----					
8. Unrelenting Standards	.19*	.17*	.21*	.22*	.24*	.22*	.25*	----				
9. Insufficient Self-control	.31*	.42*	.37*	.40*	.25*	.34*	.20*	.20*	----			
10. Vulnerability	.38*	.36*	.25*	.30*	.45*	.33*	.20*	.21*	.31*	----		
11. Enmeshment	.54*	.34*	.23*	.30*	.25*	.33*	.24*	.24*	.26*	.34*	----	
12. Fear of Losing Control	.23*	.24*	.29*	.34*	.30*	.22*	.16*	.23*	.44*	.32*	.18*	----

Note. * $p < .001$. Missing data was deleted listwise. N = 718.

Inter-Correlations of Three Types of Psychopathology

Inter-correlations among three different types of psychopathology are listed in Table 8. Consistent with the previous studies, depression was found highly and significantly correlated with anxiety ($r = .73$) (e.g., Clark and Watson, 1991; Dobson, 1985; Gotlib and Cane, 1989).

On the other hand, as expected, aggression only had a mild correlation with depression ($r = .35$) and anxiety ($r = .35$).

Table 8.
Inter-correlation Matrix of three outcome variables

	Depression	Anxiety	Aggression
Depression	----		
Anxiety	.73*	----	
Aggression	.35*	.35*	----

Note. * $p < .001$. Missing data was deleted listwise. $N = 772$.

Depression = Depression Self-rating scale; Anxiety = State-Trait Anxiety Inventory - State; Aggression = Youth Self - Report (Aggression subscale).

Correlations between Parenting Subscales, Schemas Subscales and PsychopathologyParenting Subscales and Schemas Subscales

To examine the relationships between the variables considered in this study, Pearson correlation coefficients were computed. Significant levels were set at .001. Correlations between the 10 parenting subscales and 12 schema subscales are listed in Table 9. Correlations between these subscales ranged from .14 to .49, indicating parenting styles were mildly to moderately correlated with cognitive schemas.

Table 9.
Correlations between the Parenting Scale and the Schema Questionnaire

Schema	Parental Warmth	Inconsistency	Overprotection	Rejection	Parenting Coercion	Subscales			
						Over-demand	Lax Control	Punishment	Autonomous Grant
Subscales									
Dependency	-.06	.16*	.29*	.18*	.24*	.16*	.22*	.15*	-.11
Incompetence	-.16*	.23*	.20*	.29*	.26*	.24*	.13	.16*	-.12
Emo. Dep.	-.34*	.35*	.21*	.46*	.28*	.25*	.30*	.23*	-.22*
Abandonment	-.11	.16*	.21*	.19*	.21*	.22*	.09	.04	.02
Mistrust	-.16*	.22*	.20*	.24*	.23*	.21*	.19*	.11	-.12
Emo. Inhibit	-.17*	.25*	.16*	.20*	.20*	.18*	.15*	.05	-.11
Self-Sacrifice	-.02	.08	.11	.14*	.20*	.21	.10	.04	-.03
Unrelenting St.	-.06	.14*	.19*	.15*	.17*	.35*	.05	.05	-.06
In. Control	-.17*	.21*	.25*	.25*	.19*	.26*	.14*	.07	-.04
Vulnerability	-.16*	.19*	.18*	.27*	.25*	.19*	.18*	.14*	-.14*
Enmeshment	-.08	.26*	.39*	.28*	.43*	.34*	.10	.22*	-.19*
Losing Control	-.12	.17*	.17*	.24*	.17*	.18*	.10	.09	-.02

Note. Missing data was deleted listwise. N = 675. * = p < .001.

Parental Warmth = Parental Warmth / Support; Emo. Dep. = Emotional Deprivation; Emo. Inhibit = Emotional Inhibition; Unrelenting St. = Unrelenting standards; In. Control = Insufficient Self-Control; Losing Control = Fear of Losing Control.

Parenting Subscales and Psychopathology

Further analyses were conducted separately to examine the relationships between each parenting subscale and each type of psychopathology (i.e., depression, anxiety and aggression). The correlations between different psychopathology and the parenting styles are listed in Table 10.

As can be seen in the table, adolescents' depression scores were significantly correlated with their scores on the parenting subscales (ranged from .13 to .43). Among the 10 parenting styles, "Rejection" ($r = .43$), "Neglect" ($r = .39$), "Coercion" ($r = .28$), "Inconsistency" ($r = .27$), and "Overprotection" ($r = .26$) were relatively more strongly associated with adolescents' depression. On the other hand, "Parental Warmth/Support" ($r = -.30$) and "Autonomous Grant" ($r = -.29$) were found inversely correlated with adolescents' depression.

Table 10 also shows the relationships between parenting styles and adolescents' anxiety. With the exception of "Lax Control" ($r = .05$), all the parenting subscales correlated significantly with adolescents' anxiety (alphas ranged from .12 to .30). "Coercion" ($r = .30$), "Over-demand" ($r = .28$), "Inconsistency" ($r = .24$), "Rejection" ($r = .24$), "Over-demand" ($r = .24$), and "Neglect" ($r = .24$) were relatively more strongly associated with adolescents' anxiety than the other parenting subscales.

Compared with depression and anxiety, the magnitude of correlations between parenting subscales and aggression scale were smaller (ranged from .10 to .21). "Inconsistency" ($r = .21$), "Rejection" ($r = .20$), and "Neglect" ($r = .19$) were relatively more strongly correlated with aggression. While "Parental Warmth/Support" ($r = -.20$) was inversely related to it.

Table 10.

Correlations between Different Types of Psychopathology and the Parenting Scale

	Depression (N = 721)	Anxiety (N = 724)	Aggression (N = 724)
Parental Warmth/Support	-.30***	-.14***	-.20***
Inconsistency	.27***	.24***	.21***
Overprotection	.26***	.24***	.10**
Rejection	.43***	.30***	.20***
Coercion	.28***	.28***	.16***
Over-demand	.23***	.24***	.10*
Lax Control	.13**	.05	.17***
Punishment	.19***	.12**	.17***
Autonomous Grant	-.29***	-.18***	-.12**
Neglect	.39***	.24***	.19***

Note. *** $p < .001$ ** $p < .01$ * $p < .05$

Missing data was deleted listwise. N = Sample size.

Depression = Depression Self-Rating Scale; Anxiety = State-Trait Anxiety Inventory-State; Aggression = Youth Self-Report (Aggressive Behavior Subscale).

Cognitive Schemas and Psychopathology

Table 11 presents the correlations among the 12 schemas subscales and psychopathology. Adolescents' depression found to have the strongest relations with cognitive schemas when compared with anxiety and aggression. All schemas subscales were significantly correlated with depression scale (alphas ranged from .16 to .47, $p < .001$). "Emotional Deprivation" ($r = .47$), "Incompetence/Inferiority" ($r = .46$), "Fear of Losing Control" ($r = .34$), "Abandonment" ($r = .33$), "Dependency" ($r = .32$) had comparatively stronger correlations with adolescents' depression.

Adolescents' anxiety was also significantly correlated with all schemas subscales as well (alphas ranged from .16 to .33, $p < .001$). The magnitude of correlations between subscales "Abandonment" ($r = .33$), "Vulnerability" ($r = .33$), "Incompetence/Inferiority" ($r = .32$), "Fear of Losing Control" ($r = .31$), "Dependency" ($r = .30$), "Emotional Deprivation" ($r = .30$), "Insufficient Self-Control" ($r = .30$) and

anxiety scale were relatively stronger than the other subscales.

The magnitude of correlations between aggression and cognitive schemas were comparatively smaller. All schemas subscales, with the exception of "Self-Sacrifice" ($r = .03$), were significantly correlated with adolescents' aggression (ranging from .10 to .32). Comparatively, "Fear of Losing Control" ($r = .32$), "Mistrust" ($r = .22$), "Vulnerability" ($r = .21$), "Dependency" ($r = .19$), and "Insufficient Self-Control" ($r = .19$) were more strongly associated with aggression.

Table 11.

Correlations between Different Types of Psychopathology and the Schemas Questionnaire

	Depression (N = 711)	Anxiety (N = 714)	Aggression (N = 714)
Dependency	.32***	.30***	.19***
Incompetence/Inferiority	.46***	.32***	.16***
Emotional Deprivation	.47***	.30***	.16***
Abandonment	.33***	.33***	.18***
Mistrust	.26***	.24***	.22***
Emotional Inhibition	.23***	.23***	.14***
Self-Sacrifice	.19***	.19***	.03
Unrelenting Standards	.16***	.16***	.10**
Insufficient Self-control	.31***	.30***	.19***
Vulnerability	.31***	.33***	.21***
Enmeshment	.30***	.27***	.15***
Fear of Losing Control	.34***	.31***	.32***

Note. *** $p < .001$ ** $p < .01$

N = Sample size. Missing data was deleted listwise.

Depression = Depression Self-Rating Scale; Anxiety = State-Trait Anxiety Inventory-State; Aggression = Youth Self-Report (Aggressive Behavior Subscale).

Primary Research Question:

Testing Hypotheses Concerning the Mediational Role of Maladaptive Cognitive Schemas among Perceived Parenting Styles and Adolescent Psychopathology

One of the major goals of the present study attempts to clarify and examine the

differential mediating roles of cognitive schemas in the relationship between parenting styles and different types of psychopathology, namely, anxiety, depression and aggression. As mentioned above, (see Tables 10 and 11), perceived parenting styles and maladaptive schemas were found significantly correlated with different types of psychopathology. These relations supported the first and second conditions of cognitive mediation as suggested by Baron and Kenny (refer to Chapter I).

Significant relations were also found between cognitive schemas and perceived parenting styles (see Table 9). Hence, the third condition for cognitive mediation was also supported.

In order to examine the hypothesis that cognitive schemas played the role of a mediator in the relationship between parenting styles and psychopathology (i.e., the fourth condition for the establishment of cognitive mediation), hierarchical regression analyses were performed separately to determine whether the predictive power of perceived parenting styles on psychopathology was eliminated or substantially reduced when the effects of cognitive schemas were controlled. Variables chosen into the models (i.e., subscales of the Parenting Scale and the SQ) were according to the results of regression analyses (refer to Table 12 and 13). This procedure could reveal those variables that were most predictive of the dependent variables (i.e., different types of psychopathology).

Gender

To see whether there were different patterns of association across gender were existed between perceived parenting styles and psychopathology, and between cognitive schemas and psychopathology, separate regression analyses were conducted between boys and girls. Regarding to depression and anxiety, similar variables were selected for the

boy and girl samples across two scales. However, rather different parenting subscales were chosen for aggression across two gender samples. Given that obvious gender differences was only found in aggression but not in depression and anxiety, separate gender analyses on boys and girls were only conducted for aggression in the following analyses. For depression and anxiety, a combined sample was used.

Regression Analyses

Parenting Scale

Separate regression analyses were conducted between various parenting styles and the three types of psychopathology under investigation. Regression analyses were used to identify the most significant predictors for further analyses. Regarding depression, parenting subscales "Overprotection", "Rejection", "Autonomous Grant" and "Neglect" parenting subscales were chosen; subscales "Overprotection", "Rejection" and "Over-demand" subscales were selected for anxiety. Regarding aggression, "Parental Warmth/Support", "Inconsistency", and "Lax Control" subscales were selected for analysis with boys; while "Rejection" and "Over-demand" subscales were selected for analysis with girls. The beta, R^2 , R^2 change and F-value of each regression analysis are listed in Table 12.

Table 12.
Regression Analysis of Parenting Scale on Psychopathology

	Step	β	R^2	R^2 change	F-value
Depression	1. Rejection	.35	.19	.19	166.60***
	2. Neglect	.35	.21	.02	94.22***
	3. Overprotection	.20	.22	.02	68.76***
	4. Autonomous Grant	-.26	.23	.01	53.54*
Anxiety	1. Rejection	.30	.09	.09	70.63***
	2. Overprotection	.18	.11	.02	45.69***
	3. Over-demand	.26	.01	.12	33.71**
Aggression	(Boys)				
	1. Inconsistency	.26	.06	.06	21.61***
	2. Parental warmth/support	-.12	.09	.03	16.44**
	3. Lax Control	.32	.10	.01	13.05*
	(Girls)				
	1. Rejection	.17	.03	.03	13.33***
	2. Over-demand	.21	.05	.01	8.91*

Note. *** $p < .001$; ** $p < .01$; * $p < .05$

Missing data was deleted listwise. Depression = Depression Self-Rating Scale; Anxiety = State-Trait Anxiety Inventory- State; Aggression = Youth Self-Report (Aggressive Behavior Subscale).

Schema Questionnaire

With regard to schemas, the significant predictors (cognitive schemas) for depression were "Incompetence/Inferiority" "Emotional deprivation", "Abandonment", "Enmeshment" and "Fear of Losing Control"; for anxiety were "Incompetence/Inferiority", "Emotional Deprivation", "Abandonment", "Vulnerability", "Enmeshment" and "Fear of Losing Control". Lastly, the significant predictors for aggression for boys were "Fear of Losing Control" and "Vulnerability"; while "Fear of Losing Control" and "Mistrust" were selected for girls. The R^2 , R^2 change and F-value of each regression analysis are presented in Table 13.

Table 13.
Regression Analysis of Cognitive Schemas on Psychopathology

Measure	Step	β	R^2	R^2 change	F-value
Depression	1. Emotional Deprivation	.35	.22	.22	205.32***
	2. Incompetence/Inferiority	.30	.31	.08	155.78***
	3. Fear of Losing Control	.31	.34	.03	120.41***
	4. Enmeshment	.15	.35	.01	93.60**
	5. Abandonment	.08	.35	.003	76.03*
Anxiety	1. Abandonment	.16	.11	.11	88.55***
	2. Vulnerability	.21	.17	.06	72.38***
	3. Incompetence/Inferiority	.13	.20	.03	57.67***
	4. Fear of Losing Control	.24	.22	.02	48.84***
	5. Emotional Deprivation	.12	.22	.01	41.02**
	6. Enmeshment	.15	.23	.01	35.63**
Aggression	(Boys)				
	1. Fear of Losing Control	.50	.10	.10	38.44***
	2. Vulnerability	.23	.12	.02	23.91**
	(Girls)				
	1. Fear of Losing Control	.45	.12	.12	47.93***
	2. Mistrust	.14	.13	.02	28.07**

Note. * $p < .05$; ** $p < .01$; *** $p < .001$. Missing data was deleted listwise.
Depression = Depression Self-Rating Scale; Anxiety = State-Trait Anxiety Inventory-State; Aggression = Youth Self-Report (Aggressive Behavior Subscale).

Hierarchical Regression Analyses

Since different patterns of association were found between parenting styles and different types of psychopathology, and between cognitive schemas and different types of psychopathology, separate hierarchical regression analyses were performed on different types of psychopathology (refer to Tables 12 and 13).

Results are presented in Table 14, which indicates the results of hierarchical regression analyses of adolescent depression, anxiety, and aggression (boys and girls), including the R^2 , R^2 changes and F-value after each block of independent variables (variables extracted by previous regression analyses) was entered.

As can be seen in Table 14, results clearly indicated that, after controlling for the schema subscales, the strength of association between the parenting subscales and three types of psychopathology was considerably reduced. Even though parenting subscales still could exert a significant F change, the explained proportion of variances were substantially reduced. Similar patterns of results were found across three types of psychopathology. Regarding to depression, the addition of parenting subscales to schema subscales only made a 4% increase of accounted variance, compared to 21% if they were entered in the first step. With regard to anxiety, parenting subscales only exerted a 2% increase, compared to 12% if they were entered first. Finally, regarding to aggressive boys, the addition of parenting subscales added a 5% accounted variance compared to its former 9% of accounted variance; for aggressive girls, parenting subscales only contributed to a non-significant 1% increased in accounted variance, compared to former 4% of accounted variance.

Further hierarchical regression analyses were conducted to test the fifth condition required for cognitive mediation, in which cognitive schemas were regressed on different types of psychopathology, after controlling for the parenting subscales (refer to Table 14). In support of the mediational hypothesis, results indicated that after controlling for the influence of parenting styles, the formerly significant relationship between psychopathology and the schema subscales remained significant. Furthermore, schema subscales could still explain a substantial proportion of variance even if they were entered in the second step. With regard to depression, the addition of cognitive schemas to parenting styles contributed a 18% increase of accounted variance, and 13% increase in anxiety, 8% increase in aggressive boys and 9% increase in aggressive girls respectively.

Table 14.

Hierarchical Regression of Parenting Styles, Schemas and Psychopathology

	Step	R ²	R ² change	F change
Depression	1. Parenting Scale ^a	.21	.21	49.35***
	Overprotection			
	Rejection			
	Autonomous Grant			
	Neglect			
	2. Schema ^a	.39	.18	41.62***
	Incompetence/Inferiority			
	Emotional Deprivation			
	Abandonment			
	Enmeshment			
Anxiety	1. Schema ^a	.35	.35	76.86***
	Incompetence/Inferiority			
	Emotional Deprivation			
	Abandonment			
	Enmeshment			
	Fear of Losing Control			
	2. Parenting ^a	.39	.04	12.81***
	Overprotection			
	Rejection			
	Autonomous Grant			
	Neglect			
	1. Parenting ^a	.12	.12	31.67***
	Overprotection			
	Rejection			
	Over-demand			
	2. Schema ^a	.25	.13	21.54***
	Abandonment			
	Vulnerability			
	Incompetence/Inferiority			
	Fear of Losing Control			
	Emotional Deprivation			
	Enmeshment			
	1. Schema ^a	.23	.23	36.72***
	Abandonment			
	Vulnerability			
	Incompetence/Inferiority			
	Fear of Losing Control			
	Emotional Deprivation			
	Enmeshment			
	2. Parenting ^a	.25	.02	5.33**

		Overprotection	Rejection	Over-demand
Aggression	(Boys)			
	1. Parenting ^a	.09	.09	11.93***
	Parental Warmth/Support			
	Inconsistency			
	Lax Control			
	2. Schema ^a	.17	.08	16.84***
	Fear of Losing Control			
	Vulnerability			
	1. Schema ^a	.12	.12	24.98***
	Fear of Losing Control			
	Vulnerability			
	2. Parenting ^a	.17	.05	6.76***
	Parental Warmth/Support			
	Inconsistency			
	Lax Control			
	(Girls)			
	1. Parenting ^a	.04	.04	8.74***
	Rejection			
	Over-demand			
	2. Schema ^a	.13	.09	18.92***
	Fear of Losing Control			
	Mistrust			
	1. Schema ^a	.12	.12	25.36***
	Fear of Losing Control			
	Mistrust			
	2. Parenting ^a	.13	.01	2.88
	Rejection			
	Over-demand			

*** p < .001; ** p < .01; * p < .05.

Note. N = sample size; Depression = Depression Self-Rating Scale; Anxiety = State-Trait Anxiety Inventory-State; Aggression = Youth Self-Report (Aggressive Behavior subscale); Parenting = Parenting Scale; Schema = Young's Schema Questionnaire.

^a Variables at these steps were entered as a block.

While the general direction of the correlation and regression results can be viewed as supportive of the mediational model, they are not as clear-cut and straight forward as one would ideally hope for. Though the effects of perceived parenting styles on different

types of psychopathology were substantially reduced when the effects of cognitive schemas were taken into account (refer to Table 14), it was not sure whether they were completely, versus partially, mediated by the cognitive schemas. According to Baron and Kenny (1986), in the case of partial mediation, the effect of perceived parenting styles would be reduced but would continue to serve as a significant predictor of adolescents' psychopathology when cognitive schemas were controlled. In contrast, for complete mediation, perceived parenting styles could no longer serve as a significant predictor of adolescents' psychopathology when cognitive schemas were controlled. In this study, results from the hierarchical regression analyses revealed that the effects of parenting styles, after the effects of cognitive schemas were controlled, were only substantially reduced but not eliminated (except for aggression in girls).

Testing the Mediational Models

The method of Structural Equation Modeling using EQS (Bentler, 1996) was employed to compare the complete versus partial mediation models. For the purpose of cross-validation, sample was split into two by random sampling. Each sample contained 395 subjects. Model was first constructed and modified by using Sample 1. Then, it was cross-validated by using Sample 2. One of the latent factors, perceived parenting styles, contained the parenting subscales. Subscales being selected into this latent variable were based on the results of previous regression analyses (refer to Table 13). These variables were found to have the strongest relations with different types of psychopathology.

Regarding the second latent variable, maladaptive cognitive schemas, it was

composed of the subscales of the Schema Questionnaire. The selection of cognitive schemas into the models were also based on the results of previous separate stepwise regression analyses (refer to Table 13).

Model of Depression

Using depression as the outcome variable, its relationship with cognitive schemas and perceived parenting styles is presented in Figure 1. The model predicted that perceived parenting styles (Overprotection, Rejection, Autonomous Grant and Neglect) influenced the formation of cognitive schemas (Incompetence / Inferiority, Emotional Deprivation, Abandonment, Enmeshment and Fear of losing control), which led to depression. The complete mediation model provided a good fit of the data ($X^2(29) = 63.46, p < .001, CFI = .95, RMSEA^1 = .06$) (see Figure 1a). For the partial mediation model, though similar result was obtained ($X^2(28) = 62.59, p < .001, CFI = .95, RMSEA = .06$), the additional path from perceived parenting style to depression was insignificant (see Figure 1b). A significant chi-square should indicate that the proposed model was rejected. However, in practice, it was very difficult to get a non-significant chi-square with large sample size, since trivial discrepancy would lead to the rejection of the model. Instead, more weight should be given to CFI and RMSEA, which indicated a good model fit for the proposed model. Separate models for boys and girls are attached in Appendix VIII for reference.

¹ RMSEA stands for Root Mean Square Error of Approximation, which is an index based on analyzing residuals (an estimated value of the population discrepancy function). Good fitting models have small RMSEA. Generally $< .05$ indicates close fit, $.05 - .08$ indicates reasonable fit, $> .10$ indicates inadequate fit.

Model of anxiety

Figure 2 displays the models of anxiety. The model examines the role of parenting styles (Overprotection, Rejection, and Over-demand) in influencing cognitive schemas (Incompetence / inferiority, Emotional Deprivation, Abandonment, Vulnerability, Enmeshment, and Fear of Losing Control), which in turn, led to anxiety. The complete mediation model provided a good fit of the data ($X^2(29) = 51.03$, $p = .01$, CFI = .96, RMSEA = .04) (see Figure 2a). For the partial mediation model, similar goodness of fit index was obtained ($X^2(28) = 50.07$, $p = .01$, CFI = .96, RMSEA = .05). However, the additional path from perceived parenting styles to anxiety was again insignificant (see Figure 2b). Separate models for girls and boys are attached in Appendix IX.

Model of Aggression

With regard to aggression, separate models were constructed for boys and girls due to different predictors were extracted in the previous regression analyses. Models of aggression for boys are displayed in Figure 3. Concerning boys, the model predicted that Parental Warmth, Inconsistency, and Lax Control parenting styles influenced that formation of Vulnerability and Fear of Losing Control schemas, which affected the manifestation of aggressive behaviors. Results indicated a satisfactory fit of data for both the complete and partial mediation models. Regarding the complete mediation model, results was $X^2(8) = 21.76$, $p = .01$, CFI = .92, RMSEA = .07 (see Figure 3a). If a direct path was added from the perceived parenting style to aggression (i.e., the partial mediation model), similar result were obtained ($X^2(7) = 20.64$, $p = .004$, CFI = .92, RMSEA = .07) (see Figure 3b). However, this path was not significant.

Regarding the model of girls, the constructed models are displayed in Figure 4. The model assumed that Rejection and Over-demand parenting styles would influence the formation of Mistrust and Fear of Losing Control schemas, which led to aggressive behaviors in girls. Results indicated a good fit of data for both the complete mediation model ($X^2(4) = 6.62, p = .16, CFI = .98, RMSEA = .04$) (see Figure 4a) and the partial mediation model ($X^2(3) = 5.76, p = .12, CFI = .98, RMSEA = .05$). Yet, results indicated that the direct path from parenting style to aggression was insignificant (see Figure 4b).

Overall, the fit indices supported the proposed mediation models across three different types of psychopathology. In addition, as all the direct paths from parenting styles to different types of psychopathology (depression, anxiety, and aggression) were insignificant, they indicated that complete mediation models described the data better than the partial mediation models.

Cross-validation

Another 395 subjects (Sample 2) derived from the total sample was used for model's cross-validation. With regard to depression, result indicated an adequate goodness of fit index ($X^2(29) = 111.67, p < .001, CFI = .92, RMSEA = .09$). Regarding anxiety, a good goodness of fit index was obtained ($X^2(29) = 71.87, p < .001, CFI = .95, RMSEA = .06$). Regarding aggression, since the sample had already split into two to examine gender differences, there would not be sufficient numbers of subjects for further division for cross-validation. Therefore, the model of aggression had not been cross validated.

CHAPTER IV

Discussion

The primary objective of this study was to evaluate the relationships between adolescents' perceived parenting styles, cognitive schemas, and different types of psychopathology (anxiety, depression and aggression). It was hypothesized that adolescents' perceived parenting styles and psychopathology was mediated by their cognitive schemas. This assumption was first supported by the correlation and hierarchical regression analyses. Results of hierarchical regression analyses showed that, even after the main effects of parenting subscales were controlled, schemas subscales still could exert significant effects on different types of psychopathology. However, after controlling the influence of cognitive schemas, the relationship between different types of psychopathology and perceived parenting styles was substantially and significantly reduced.

Further statistical analyses using methods of structural equation modeling were conducted to examine the mediational model. Goodness-of-fit tests revealed that the relationships between psychopathology and perceived parenting styles were completely, not partially, mediated by the adolescent's cognitive schemas. That is, parenting styles had no statistical significant direct effect on psychopathology. Their effects were mediated by adolescents' core underlying beliefs (i.e., cognitive schemas) (refer to Figures 1, 2, 3, and 4).

It should be noted that in structural equation modeling the parenting variables being selected into the models were those identified by separate multiple regression analyses as the most predictive on different types of psychopathology. However, when

the effects of cognitive schemas were added concurrently into the constructed models as mediators, the direct effects of these most predictive parenting styles on psychopathology became insignificant. The choice of such parenting variables makes a stringent test our mediational model.

Present findings supported the mediating role of cognitive schemas within the framework of Beck's cognitive theory (Beck, 1967, 1976; Beck et al., 1979). As mentioned in the introduction, Beck postulated that individuals were actively involved in their own realities. Their responses to the environment were largely influenced by the cognitive appraisals they made. One's cognitive schemas would affect how he or she perceived the environment and how he or she interpreted the world. Maladaptive schemas would lead one to interpret the environment in a distorted manner, and hence, leading to different types of psychological problems or disorders. In this study, results indicated that dysfunctional parenting styles were not directly associated with psychopathology, but were mediated by the adolescent's maladaptive schemas, which provided empirical evidence for an understanding of the dynamic relationships between perceived parenting styles, cognitive schemas and different types of psychopathology. It also supported Beck's cognitive theory in that one's cognitive schemas, which would affect one's perception of how his or her parents treated them, would affect his or her manifestation of psychological problems. Dysfunctional parenting styles would lead to different types of psychopathology through the mediator role of maladaptive cognitive schemas.

One of the purposes of the present study was to examine whether different types of psychopathology were characterized by different cognitive profile and parenting styles.

Results supported this hypothesis. In this study, it was found that particular kind of parental behaviors (or patterns of parent-child interaction) contributed to the formation / development of different types of cognitive schemas and psychopathology. Particularly, parenting styles considered as rejecting, neglecting, overprotective and controlling predisposed one into depression by influencing the formation of Incompetence / Inferiority, Emotional Deprivation, Abandonment, Enmeshment, and Fear of Losing Control maladaptive schemas. With regard to anxiety, it was characterized by rejecting, overprotective and over-demanding parenting styles, which predisposed one to develop Incompetence / Inferiority, Emotional Deprivation, Abandonment, Vulnerability, Enmeshment and Fear of Losing Control schemas. It should be noted that the types of parenting styles behind depression and anxiety were somewhat similar, in which both were characterized by rejection and overprotection. However, parents of depressed adolescents were more likely to neglect their children, while parents of anxious adolescents were more likely to have too many demands on their children (reflected by the accounted variance of each variable in the regression analyses, see Table 12).

Regarding aggression in boys, results reflected that they perceived their parents adopted a more inconsistent, lack of concern, and lax controlling rearing styles. These parental behaviors might predispose the youths from developing Fear of Losing Control and Vulnerability schemas, which in turn lead to the manifestation of aggressive behaviors. With regard to aggression in girls, they tended to perceive their parents adopted a more rejecting and over-demanding parenting styles. The coexisting of both a rejecting attitudes and demanding attitudes seemed to prone the child to develop Mistrust and Fear of Losing Control schemas, which in turn increased the possibility of exhibiting

aggressive behaviors.

On the other hand, consistent with previous researches (e.g., Block, 1991; Dobson, 1985; Gotlib, 1984), present findings also revealed that depression and anxiety shared a number of common characteristics. Results indicated that depression and anxiety held nearly the same kinds of dysfunctional cognitive schemas. With regard to depression, the most salient schemas were Emotional Deprivation and Incompetence / Inferiority, Fear of Losing Control, Enmeshment, and Abandonment, while anxiety was characterized by Abandonment and Vulnerability, Incompetence / Inferiority, Fear of Losing Control, Emotional Deprivation and Enmeshment. Hence, these results revealed that depressive and anxious adolescents shared a number of common core beliefs (i.e., cognitive schemas), namely, Emotional Deprivation, Incompetence / Inferiority, Fear of Losing Control, Enmeshment and Abandonment. In view of the similarity between these two internalizing problems in their underlying beliefs, it was not surprising to find that they were highly correlated.

Current findings supported Beck's (Beck and Emery, 1985) content specificity hypothesis, which stated that each psychological disorder was characterized by a unique disturbance in information processing. Based on this hypothesis, depressed adolescents were expected to differ from anxious ones in their schemas, in which they did. Though individuals with depression or anxiety shared a number of common dysfunctional core beliefs, the core beliefs among depressive adolescents were characterized by Emotional Deprivation (i.e. absence of affection, understanding or guidance from others) and Incompetence / Inferiority (i.e., belief that one was unable to handle one's everyday responsibilities in a competent manner, sense of helplessness) (refer to Table 13).

Regarding anxiety, it was characterized by Abandonment (i.e., the perceived instability or unreliability of those available for support and connection) and Vulnerability (i.e., exaggerated fear that “random” catastrophe could strike at any time and that one would be unable to prevent it) (reflecting by the accounted variance of the variables in the regression analyses, see Table 13). These findings were consistent with past research that the cognitive profiles of depression revolved around the theme of loss and deprivation whereas that anxiety consisted of a fear of physical or psychological harm (e.g., Beck and Emery, 1985; Laurent and Stark, 1993). Present findings provided support on the distinctiveness of two disorders at a basic cognitive structural level. Overall, results supported the argument that the two disorders were separable and they were characterized by distinguishable cognitive profiles.

On the other hand, results of this study also showed that aggression, an externalizing problem, had a different cognitive profile when compared with depression and anxiety. With regard to boys, their cognitive profile was characterized by Fear of Losing Control (i.e., worry about losing control of one’s behaviors or emotions), and Vulnerability schemas (i.e., exaggerated fear that “random” catastrophe could strike at any time and that one will be unable to prevent it). Concerning about girls, Mistrust (i.e., the expectations that others will hurt, abuse, humiliate, cheat, lie, manipulate, or take advantage on them) and Fear of Losing Control schemas were the most predictive. It was interesting to note that though aggression in boys and girls were characterized by different parenting styles, they led to similar maladaptive cognitive schemas. However, in regard to boys, it appeared that their fear of being hurt (mainly by external events) led them to act-out, whereas for girls, their sense of being exploited or hurt increased their

tendency to act aggressively.

Regarding the cognitive profiles (or representative schemas) of each psychological problem (which could be classified into internalizing problem – anxiety and depression, and externalizing problems – aggression), current findings suggested that different disorders were marked by distinguishable cognitive profiles, indicating the specificity of each disorder in the cognitive level.

Nonetheless, though different cognitive profiles were found among different types of psychopathology, a common theme – Fear of Losing Control – emerged in all three types of psychopathology, which suggested that worry about losing control of oneself, either behavioral or emotional, predisposed or increased the vulnerability of the adolescents in developing psychological problems. In addition to other maladaptive schemas, it might lead one developed psychopathology.

As mentioned before, research on cognitive schemas and psychopathology was scarce. One such study was conducted by Schmidt et al (1995), in which they used regression analyses to examine the relationship between cognitive schemas (by using the Schema Questionnaire) among depression and anxiety. Results showed that the significant predictors (i.e., maladaptive schemas) for depression were “Dependency” and “Defectiveness”, while for anxiety were “Vulnerability”, “Incompetence/Inferiority” and “Emotional Deprivation”. A rather different result was obtained in the present study. First, Defectiveness schema failed to emerge in the factor analysis. Second, the patterns of association between different types of psychopathology and maladaptive schemas were largely different. Further research is recommended to examine the existence of Defectiveness schema, as well as to further examine the patterns of association between

specific types of dysfunctional cognitive schemas and different types of psychopathology.

One of the added values of the current study was that it provided a self-reported parenting scale that appeared to have sound psychometric properties. The factor structure of the parenting scale used in this study provided 10 parenting styles similar to those reported by others using different instruments (e.g., Margolies and Weintraub, 1977), indicating these ten parenting styles were cross-culturally applicable. The ten parental behaviors emerged in this study could be further classified into three domains. They were: authoritative parenting (i.e., a constellation of parent attributes that includes emotional support and appropriate autonomy granting), which composed of Parental Warmth / Support and Autonomous Grant subscales; neglectful parenting (i.e., parents who are simply unavailable to their children, failing to be either involved, controlling, or supportive in self-regulation), which composed of Neglect and Rejection subscales; and authoritarian parenting (i.e., parents who make high demand on the behavior and performance of the children, enforced by strict, sometimes harsh, discipline), which composed of Rejection, Neglect, Inconsistency, Coercion, and Punishment subscales. There were other parenting subscale like Lax control, Over-demand, and Over-protection which were also extracted in this study, but they were less correlated with other subscales.

Psychological Control (reflecting the degree to which parents are perceived as being intrusive and using anxiety and guilt to control the child's behaviors) and Dependency (reflecting the degree to which the child perceived that their parents made him or her dependent on them) failed to emerge in the present factor analysis. This result suggested two possibilities. One is that Psychological Control and Dependency parenting styles were not perceived as important parenting style in Chinese adolescents.

However, it is more likely that the items relating to them were not well constructed.

Further investigation is needed before any definite conclusion can be made.

Furthermore, the findings for the parental warmth / support dimension were consistent with those reported by Eisenberg et al. (Eisenberg, Miller, Shell, and McNalley, 1991) (cf. Dusek and Danko, 1994). An adolescent whose parents behaved in a manner perceived as warmth and accepting was found to manifest less psychological problems. Furthermore, parental warmth was negatively related to various measures of adolescent psychopathology and dysfunctional cognitive schemas (reflecting by the negative correlations between the Parental Warmth / Support and Parental Guidance parenting subscales and different types of psychopathology in the correlation analysis). As Dusek and Danko (1994) noted, perceiving the parents as more warm and nurturant seemed to “insulate” the adolescent from the negative effects of stress because of the positive developmental outcomes associated with such parenting practices.

Limitations and Future direction

The results of the present study suggested that parental behaviors were a distal factor whereas dysfunctional cognitive schemas were a proximal factor of different types of psychopathology. However, other developmental experiences might be equally important in contributing to cognitive vulnerabilities, and they have not been examined in the current study. For example, adolescent's cognition might also be affected by peer relations, school life or other significant life events. Therefore, future research is needed to expand the present model by studying the other possible factors.

Beck (1996) pointed out that psychopathology was affected by many possible

factors, and the relationship among these factors was neither linear nor simple. The present study only examined the simple linear relationship between perceived parenting styles, cognitive schemas and psychopathology. This probably could not represent the full picture. For example, it had been suggested that dysfunctional attitudes were merely a symptom of a psychological problem, such as a depressive episode (e.g., Hamilton and Abramson, 1983). Kwon and Oei (1992), in their study of the causal roles of dysfunctional attitudes and automatic thoughts in depression, suggested that the existence of a vicious circle or reciprocal relationship between maladaptive cognitions and depression, which meant maladaptive cognitions produced depression and influenced maladaptive cognitions. This suggestion might also apply to the present study on the relationship between cognitive schema and psychopathology. Maladaptive schemas might produce psychopathology, which in turn maintaining by them. To clarify the role of cognitive schemas in psychopathology, longitudinal study is recommended.

The present study had not taken the family background of the participants, such as their family's economic status, number of siblings they had, and the marital status of their parents, into account. Since the adopted parenting styles may be influenced by these factors, to extend the present findings, future research can try to address these variables.

In conclusion, the present study supported a meditational model: cognitive schemas were the mediators between parenting styles and psychopathology. Furthermore, findings indicated that different types of psychopathology were specified by different types of cognitive schemas and parenting styles. However, current research only examined the simple linear relationship between these factors. Other factors probably also play some influencing role in psychopathology. The models proposed in this research

could not regard as the only models for psychopathology. As suggested by Kwon and Oei (1992), a structural model that fit observed data should not be interpreted as the only model that would fit the data. Other models might fit the data equally well or even better. Future research can try to expand the model by incorporating other possible variables.

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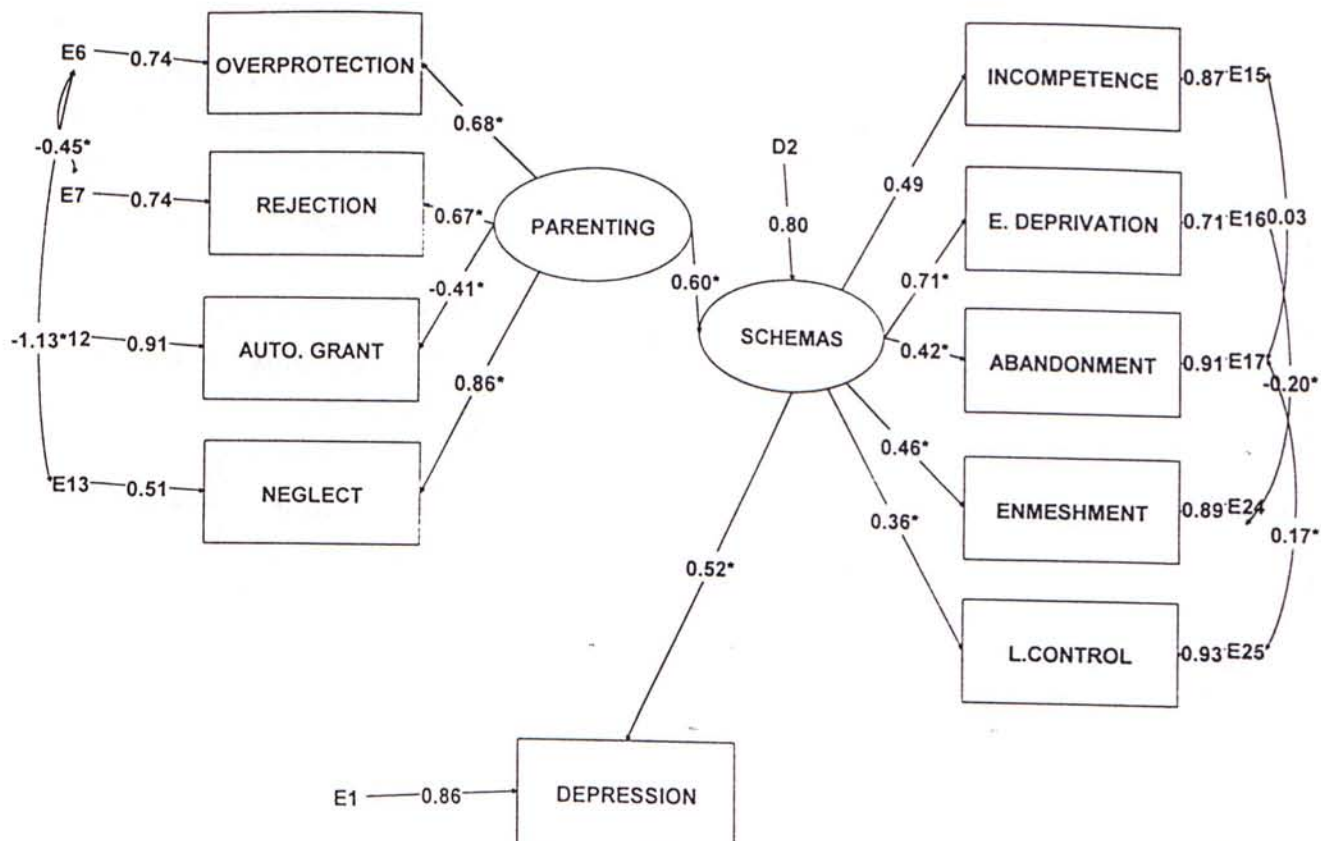
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Figure 1 Models of depression



$X^2 (29) = 63.46, p < .001$

CFI = .95

RMSEA = .06

NOTE:

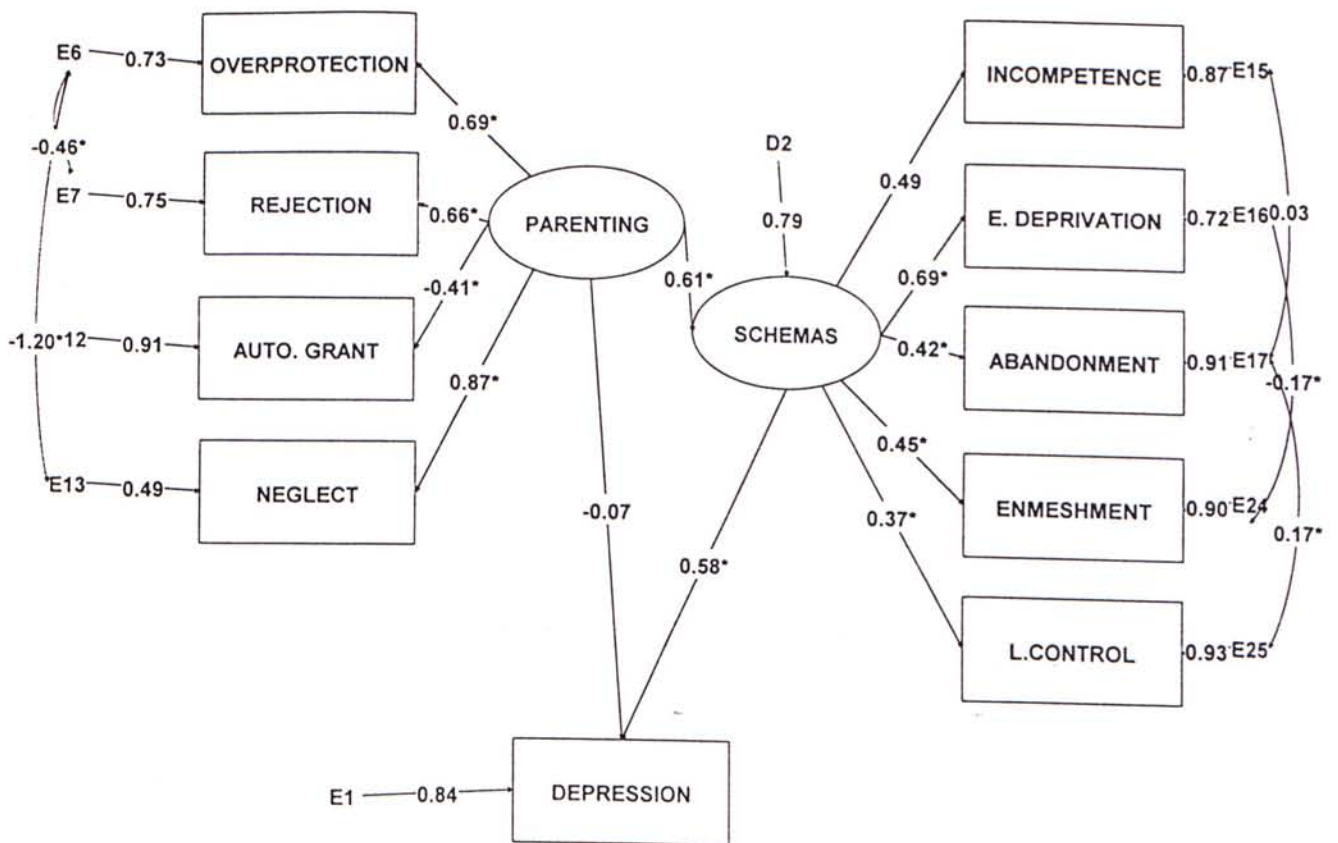
AUTO.GRANT = AUTONOMOUS GRANT;

E.DEPRIVATION = EMOTIONAL DEPRIVATION;

INCOMPETENCE = INCOMPETENCE/INFERIORITY;

L.CONTROL = FEAR OF LOSING CONTROL.

Figure 1a. Model for depression (complete mediation).



NOTE:

AUTO.GRANT = AUTONOMOUS GRANT;

E.DEPRIVATION = EMOTIONAL DEPRIVATION;

INCOMPETENCE = INCOMPETENCE/INFERIORITY;

L.CONTROL = FEAR OF LOSING CONTROL.

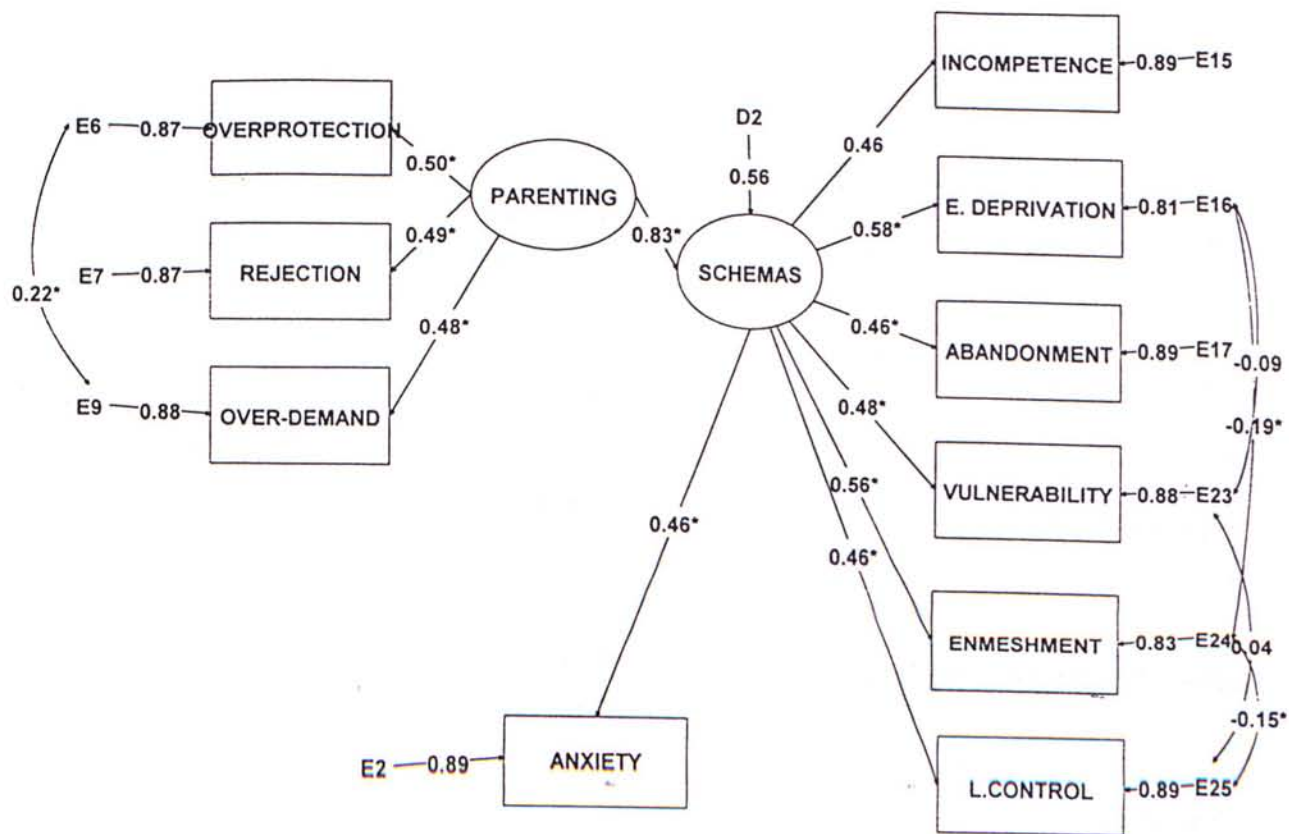
$\chi^2 (28) = 62.59, p < .001$

CFI = .95

RMSEZ = .06

Figure 1b. Model for depression (partial mediation).

Figure 2 Models of anxiety



NOTE:

INCOMPETENCE = INCOMPETENCE/INFERIORITY;

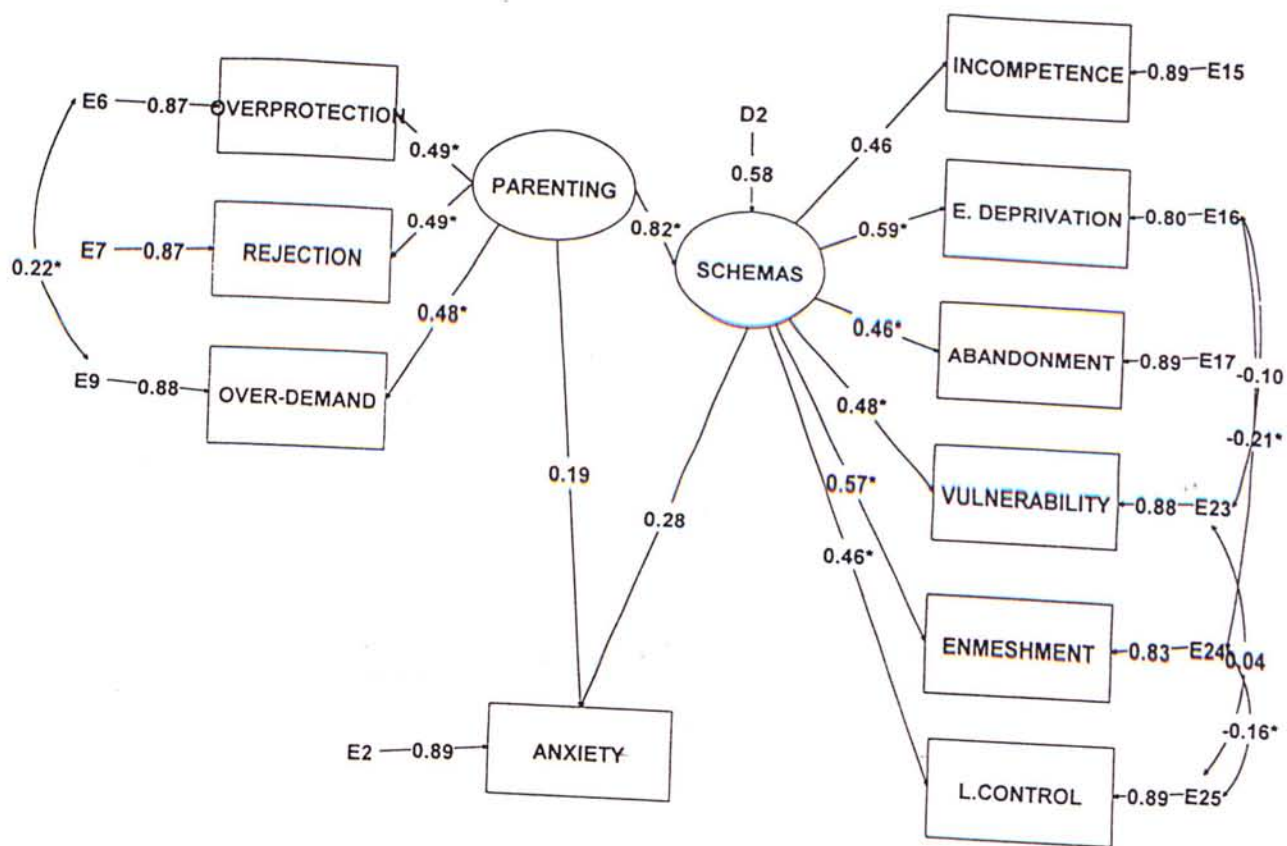
L.CONTROL=FEAR OF LOSING CONTROL.

$X^2 (29) = 51.03, p = .01$

CFI = .96

RMSEA = .04

Figure 2a. Model for anxiety (complete mediation).



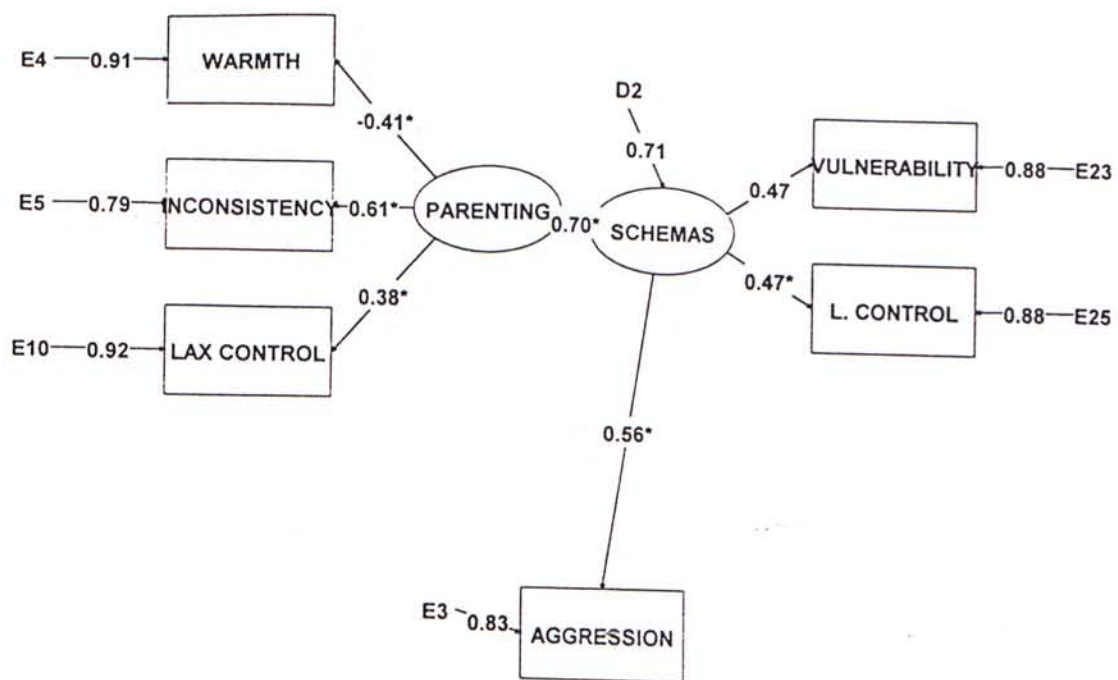
NOTE:

INCOMPETENCE = INCOMPETENCE/INFERIORITY;
L.CONTROL=FEAR OF LOSING CONTROL.

$\chi^2(28) = 50.07, p = .01$
CFI = .96
RMSEA = .05

Figure 2b. Model for anxiety (partial mediation).

Figure 3 Models of aggression (for boys).



$\chi^2(8) = 21.76, p = .01$
 CFI = .92
 RMSEA = .07

Figure 3a. Model for aggression (boys) (complete mediation).

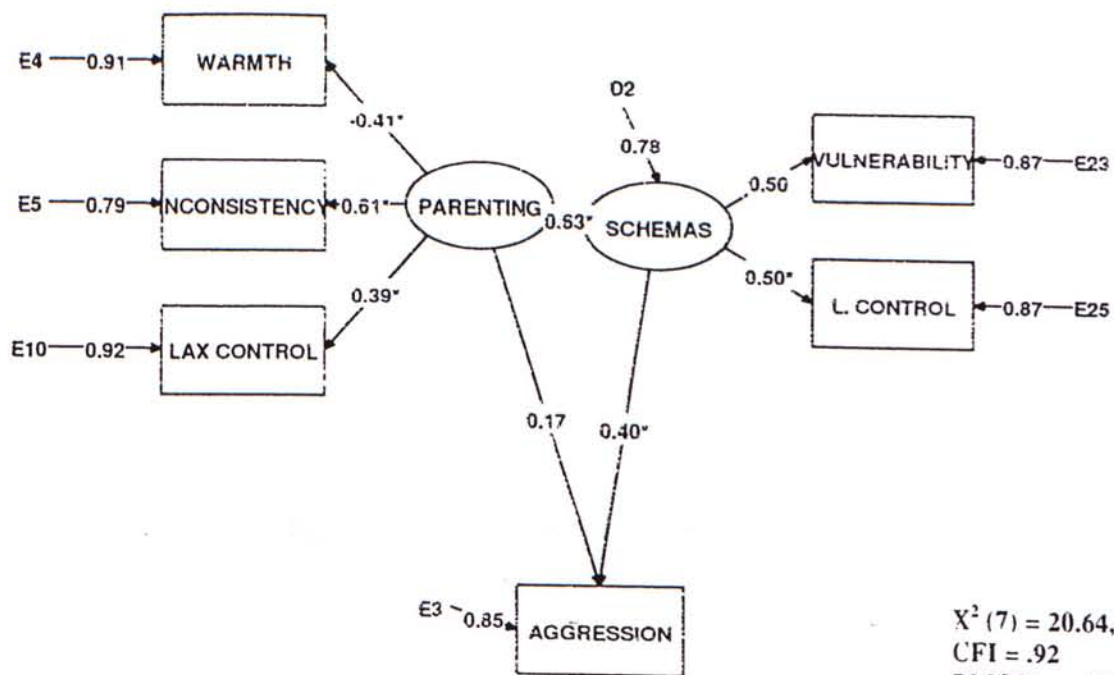


Figure 3b. Model for aggression (boys) (partial mediation).

Figure 4 Models of aggression (for girls).

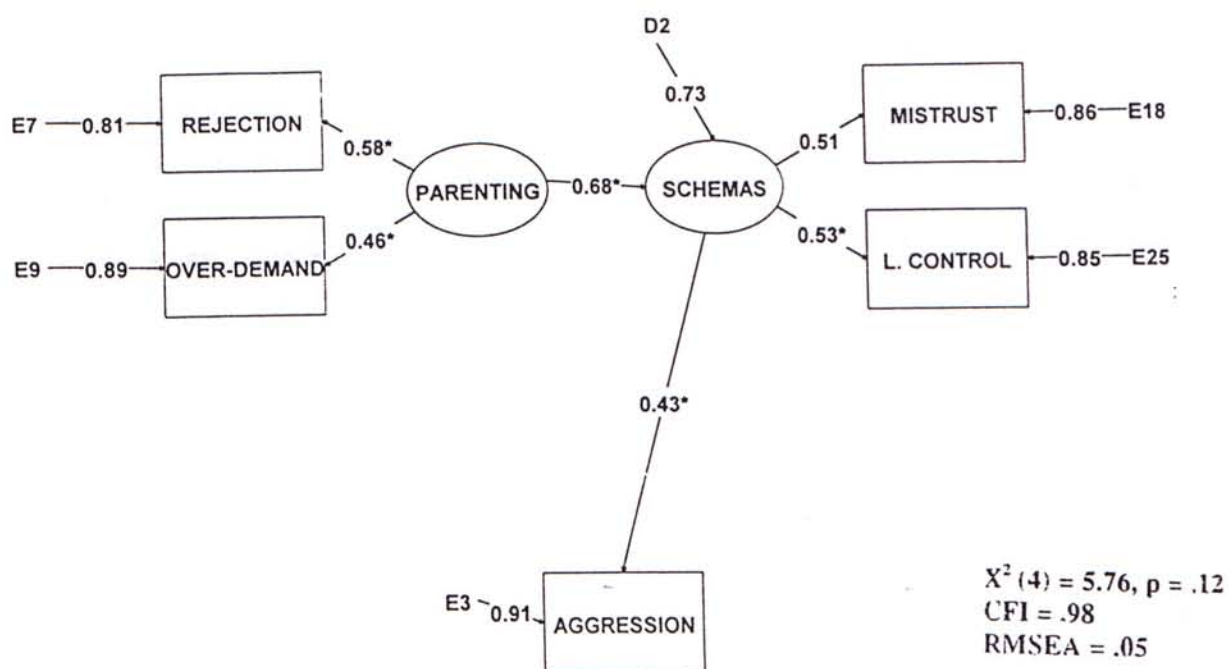


Figure 4a. Model for aggression (girls) (complete mediation).

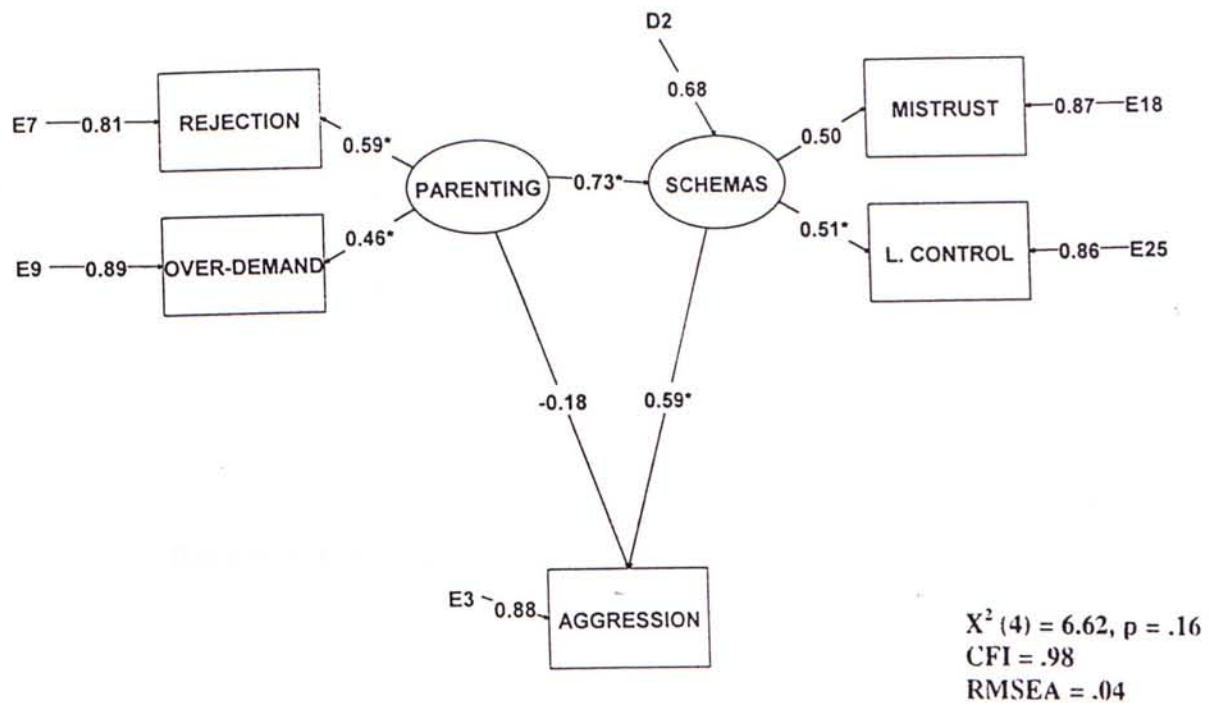


Figure 4b. Model for aggression (girls) (partial mediation).

Appendix I

Early Maladaptive Schemas with Domains (Young, Revised January 1995)

Disconnection and Rejection

(Expectation that one's needs for security, safety, stability, nurturance, empathy, sharing of feelings, acceptance, and respect will not be met in a predictable manner. Typically family origins is detached, cold, rejecting, withholding, lonely, explosive, unpredictable, or abusive.)

1. Abandonment / Instability

The perceived instability or unreliability of those available for support and connection.

Involves the sense that significant others will not be able to continue providing emotional support, connection, strength, or practical protection because they are emotionally unstable and unpredictable (e.g., angry outbursts), unreliable, or erratically present; because they will die imminently; or because they will abandon the patient in favor of someone better.

2. Mistrust / Abuse

The expectation that others will hurt, abuse, humiliate, cheat, lie, manipulate, or take advantage. Usually involves the perception that the harm is intentional or the result of unjustified and extreme negligence. May include the sense that one always ends up being cheated relative to others or "getting the short end of the stick."

3. Emotional Deprivation

Expectation that one's desire for a normal degree of emotional support will not be adequately met by others. The three major forms of deprivation are;

A. Deprivation of Nurturance: Absence of attention, affection, warmth, or companionship.

B. Deprivation of Empathy: Absence of understanding, listening, self-disclosure, or mutual sharing of feelings from others.

C. Deprivation of Protection: Absence of strength, direction, or guidance from others.

4. Defectiveness / Shame

The feeling that one is defective, bad, unwanted, inferior, or invalid in important respects; or that one would be unlovable to significant others if exposed. May involve hypersensitivity to criticism, rejection, and blame; self-consciousness, comparisons, and insecurity around others; or a sense of shame regarding one's perceived flaws. These flaws may be private (e.g., selfishness, angry impulses, unacceptable sexual desires) or public (e.g., undesirable physical appearance, social awkwardness).

5. Social Isolation / Alienation

The feeling that one is isolated from the rest of the world, different from other people, and / or not part of any group of community.

Impaired Autonomy and Performance

(Expectations about oneself and the environment that interfere with one's perceived ability to separate, survive, function independently, or perform successfully. Typical family origin is enmeshed, undermining of child's confidence, overprotective, or failing to reinforce child for performing competently outside the family.)

6. Dependence / Incompetence

Belief that one is unable to handle one's everyday responsibilities in a competent manner, without considerable help from others (e.g., take care of oneself, solve daily problems, exercise good judgment, tackle new tasks, make good decisions). Often presents as helplessness.

7. Vulnerability to Harm or Illness

Exaggerated fear that "random" catastrophe could strike at any time and that one will be unable to prevent it. Fears focus on one or more of the following: (A) Medical: e.g., heart attack, AIDS; (B) Emotional: e.g., go crazy; (C) Natural / Phobic: elevators, crime, airplanes, earthquakes.

8. Enmeshment / Undeveloped Self

Excessive emotional involvement and closeness with one or more significant others (often parents), at the expense of full individuation or normal social development. Often involves the belief that at least one of the enmeshed individuals cannot survive or be happy without the constant support of other. May also include feelings of being smothered by, or fused with, others OR insufficient individual identity. Often experienced as a feeling of emptiness and floundering, having no direction, or in extreme cases questioning one's existence.

9. Failure

The belief that one has failed, will inevitably fail, or is fundamentally inadequate relative to one's peers, in areas of achievement (school, career, sports, etc.). Often involves beliefs that one is stupid, inept, untalented, ignorant, lower in status, less successful than others, etc.

Impaired Limits

(Deficiency in internal limits, responsibility to others, or long-term goal-orientation. Leads to difficulty respecting the rights of others, cooperating with others, making commitments, or setting and meeting realistic personal goals. Typical family origin is characterized by permissiveness, overindulgence, lack of direction, or a sense of superiority -- rather than appropriate confrontation, discipline, and limits in relation to taking responsibility, cooperating in a reciprocal manner, and setting goals. In some cases, child may not have been pushed to tolerate normal levels of discomfort, or may not have been given adequate supervision, direction, or guidance.)

10 Entitlement / Grandiosity

The belief that one is superior to other people; entitled to special rights and privileges; or not bound by the rules of reciprocity that guide normal social interaction. Often involves insistence that one should be able to do or have whatever one wants,

regardless of what is realistic, what others consider reasonable, or the cost to others; OR an exaggerated focus on superiority (e.g., being among the most successful, famous, wealthy) -- in order to achieve power or control (not primarily for attention or approval). Sometimes includes excessive competitiveness toward, or domination of, others: asserting one's power, forcing one's point of view, or controlling the behavior of others in line with one's power, forcing one's point of view, or controlling the behavior of others in line with one's own desires --- without empathy or concern for others' needs or feelings.

11. Insufficient self-control / Self-discipline

Pervasive difficulty or refusal to exercise sufficient self-control and frustration tolerance to achieve one's personal goals, or to restrain the excessive expression of one's emotions and impulses. In its milder form, patient presents with an exaggerated emphasis on discomfort-avoidance: avoiding pain, conflict, confrontation, responsibility, or overexertion --- at the expense of personal fulfillment, commitment, or integrity.

Other-Directedness

(An excessive focus on the desires, feelings, and responses of others, at the expense of one's own needs -- in order to gain love and approval, maintain one's sense of connection, or avoid retaliation. Usually involves suppression and lack of awareness regarding one's own anger and natural inclinations. Typically family origin is based on conditional acceptance: children must suppress important aspects of themselves in order to gain love, attention, and approval. In many such families, the parents' emotional needs and desires -- or social acceptance and status -- are valued more than the unique needs and feelings of each child.)

12. Subjugation

Excessive surrendering of control to others because one feels coerced -- usually to avoid anger, retaliation, or abandonment. The two major forms of subjugation are:

A. Subjugation of Needs: Suppression of one's preferences, decisions, and desires.

B. Subjugation of Emotions: Suppression of emotional expression, especially anger.

Usually involves the perception that one's own desires, opinions, and feelings are not valid or important to others. Frequently presents as excessive compliance, combined with hypersensitivity to feelings trapped. Generally leads to a build up of anger, manifested in maladaptive symptoms (e.g., passive-aggressive behavior, uncontrolled outbursts of temper, psychosomatic symptoms, withdrawal of affection, "acting out", substance abuse).

13. Self-Sacrifice

Excessive focus on voluntarily meeting the needs of others in daily situations, at the expense of one's own gratification. The most common reasons are to prevent causing pain to others, to avoid guilt from feeling selfish, or to maintain the connection with others perceived as needy. Often results from an acute sensitivity to the pain of others. Sometimes leads to a sense that one's own needs are not being adequately met and to resentment of those who are taken care of (overlaps with concept of codependency).

14. Approval-Seeking / Recognition-Seeking

An excessive emphasis on gaining approval, recognition, or attention from other

people or fitting in, at the expense of developing a secure and true sense of self. One's sense of esteem is dependent primarily on the reactions of others rather than on one's own natural inclinations. Sometimes includes an overemphasis on status, appearance, social acceptance, money, or achievement as means of gaining approval, admiration, or attention (not primarily for power or control). Frequently results in major life decisions that are unauthentic or unsatisfying, or in hypersensitivity to rejection.

Overvigilance and Inhibition

(Excessive emphasis on controlling one's spontaneous feelings, impulses, and choices in order to avoid making mistakes OR on meeting rigid, internalized rules and expectations about performance and ethical behavior –often at the expense of happiness, self-expression, relaxation, close relationships, or health. Typical family origin is grim (and sometimes punitive): performance, duty, perfectionism, following rules, and avoiding mistakes predominate over pleasure, joy, and relaxation. There is usually an undercurrent of pessimism and worry – that things could fall apart if one fails to be vigilant and careful at all times.)

15. Negativity / Vulnerability to Error (Controllable Events)

A pervasive, lifelong focus on the negative aspects of life (pain, death, loss, disappointment, conflict, guilt, resentment, unsolved problems, potential mistakes, betrayal, things that could go wrong, etc.) while minimizing or neglecting the positive or optimistic aspects OR an exaggerated expectation – in a wide range of work, financial, or interpersonal situations that are typically viewed as “controllable” – that things will go seriously wrong, or that aspects of one's life that seem to be going well will fall apart at any time. Usually involves an inordinate fear of making mistakes that might lead to: financial collapse, loss, humiliation, being trapped in a bad situation, or loss of control. Because potential negative outcomes are exaggerated, these patients are frequently characterized by chronic worry, vigilance, pessimism, complaining, or indecision

16. Emotional Inhibition / Overcontrol

The excessive inhibition of spontaneous action, feeling, or communication – usually to create a sense of security and predictability; or to avoid making mistakes, disapproval by others, catastrophe and chaos, or losing control of one's impulses. The most common areas of excessive control involve: (a) inhibition of anger and aggression; (b) compulsive order and planning; (c) inhibition of positive impulses (e.g., joy, affection, sexual excitement, play); (d) excessive adherence to routine or ritual; (e) difficulty expressing vulnerability or communicating freely about one's feelings, needs, etc.; or (f) excessive emphasis on rationality while disregarding emotional needs. Often the overcontrol is extended to others in the patients' environment.

17. Unrelenting Standards / Hypercriticalness

The underlying belief that one must strive to meet very high internalized standards of behavior and performance, usually to avoid criticism. Typically results in feelings of pressure or difficulty slowing down; and in hypercriticalness toward oneself and others. Must involve significant impairment in: pleasure, relaxation, health, self-esteem, sense of accomplishment, or satisfying relationships.

Unrelenting standards typically present as: (a) perfectionism, inordinate attention to detail, or an underestimate of how good one's own performance is relative to the norm; (b) rigid rules and "shoulds" in many areas of life, including unrealistically high moral, ethical, cultural, or religious precepts; or (c) preoccupation with time and efficiency, so that more can be accomplished.

18. Punitiveness

The belief that people should be harshly punished for making mistakes. Involves the tendency to be angry, intolerant, punitive, and impatient with those people (including oneself) who do not meet one's expectations or standards. Usually includes difficulty forgiving mistakes in oneself or others, because of a reluctance to consider extenuating circumstances, allow for human imperfection, or empathize with feelings.

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Appendix II

Questionnaires used in pilot study

父母教養方式與子女成長問卷調查

下列是一些形容你和父母關係的句子，請圈出最適合你的答案：

	十分不同意	不同意	同意	十分同意
1. 父母會和我一起玩樂或做一些開心的活動。	1	2	3	4
2. 父母花時間陪伴及留意我。	1	2	3	4
3. 我和父母的關係親密。	1	2	3	4
4. 對於和我有關的事，父母都表現得很有興趣。	1	2	3	4
5. 父母抽時間和我傾談。	1	2	3	4
6. 當我遇到困難時，父母會支持及關心我。	1	2	3	4
7. 父母在說話及行為上顯示出他們喜歡我。	1	2	3	4
8. 當我做事做得不順利時，父母會安慰及鼓勵我。	1	2	3	4
9. 父母會稱讚我。	1	2	3	4
10. 我和父母之間存在著一種溫馨、親密及親切的感覺。	1	2	3	4
11. 父母在行為上對我表現出關心。	1	2	3	4
12. 父母和我交談的語調是友善及親切的。	1	2	3	4
13. 如果我在功課上有不明白的地方，父母會指導我。	1	2	3	4
14. 父母理性及客觀地給予我指導和方向。	1	2	3	4
15. 當我有過失時，父母會冷靜地向我解釋我的錯處。	1	2	3	4
16. 當我面對困難時，父母會給予我意見及指導。	1	2	3	4
17. 當我不知如何抉擇時，父母會給予我意見。	1	2	3	4
18. 父母鼓勵我決定自己的事。	1	2	3	4
19. 只要不違反大家共同定下的規則，父母讓我決定自己的事。	1	2	3	4
20. 如果事情是合理的，父母會讓我去做。	1	2	3	4
21. 父母會給予我想要的自由，不過我得遵守彼此間同意的規則。	1	2	3	4
22. 父母讓我計劃我想做的事，若那是個好的計劃，他們會支持我去做。	1	2	3	4
23. 父母恐嚇要懲罰我，之後卻沒有這樣做。	1	2	3	4
24. 父母會否關心我，主要視乎他/她當時的心情。	1	2	3	4
25. 父母有時關心我，有時疏忽我。	1	2	3	4
26. 在監督上，父母之間有不同的態度：一個對我嚴格，另一個則對我寬鬆。	1	2	3	4
27. 在給予自由上，父母之間有不同的態度：一個給予我很多獨立的機會，另一個則要我把所有事情都和他/她報告。	1	2	3	4
28. 若果我做錯事，父母會用手打我。	1	2	3	4
29. 我做錯事時，父母會用皮帶、鞭子或其他物件打我。	1	2	3	4
30. 父母給我的懲罰是多過我應得的。	1	2	3	4
31. 父母無緣無故打我。	1	2	3	4

	十分不 同意	不同 意	同意	十分同 意
32. 與我的兄弟姐妹比較，父母對我特別差。	1	2	3	4
33. 如果有事情發生，我通常是家中唯一受責備的一個。	1	2	3	4
34. 我覺得父母不想要我。	1	2	3	4
35. 父母常常批評我，就算我做很多事情，也無法取悅他們。	1	2	3	4
36. 我覺得父母不愛或不接受我。	1	2	3	4
37. 父母經常當著別人的面批評我既懶惰，又無用。	1	2	3	4
38. 父母常常忽視或批評我的態度和感受。	1	2	3	4
39. 父母不允許我做一些其他孩子可以做的事，因為他們害怕我會出事。	1	2	3	4
40. 父母覺得如果沒有他們在我身邊，我便不能照顧自己。	1	2	3	4
41. 父母過份擔心我會生病、發生意外或做錯事。	1	2	3	4
42. 父母會替我做很多事情，而不讓我自己去做。	1	2	3	4
43. 父母把我當作小孩子般看待。	1	2	3	4
44. 父母過份呵護我。	1	2	3	4
45. 父母令我覺得我沒有足夠的能力去作決定或下判斷。	1	2	3	4
46. 我覺得我沒有足夠的獨立能力去與父母分開。	1	2	3	4
47. 由於父/母是很能幹的，所以我會依賴他們，而沒有自己的主見。	1	2	3	4
48. 父母想我依賴他們。	1	2	3	4
49. 父母並不鼓勵我依靠自己的能力去解決困難或問題。	1	2	3	4
50. 父母一定要我遵從他們的規則及指示，否則便不給我活動的自由。	1	2	3	4
51. 我做任何事都要先徵求父母的同意；若不，他們會懲罰我。	1	2	3	4
52. 父母嚴重警告我，犯錯是不可以接受的。	1	2	3	4
53. 父母不許我做他們認為不正確的事；否則他們會嚴厲地處罰我。	1	2	3	4
54. 父母嚴重警告我，不可以不用功讀書。	1	2	3	4
55. 父母總是向我說類似這樣的話：「如果你這樣做，我會很傷心」。	1	2	3	4
56. 父母總是向我說類似這樣的話：「如果你這樣做，你便有負我養育之恩」。	1	2	3	4
57. 如果我令父母失望，他們會不理會我。				
58. 如果我與父母有不同的意見，他們會顯得不友善。	1	2	3	4
59. 如果我令父母不快，他們會不和我說話，直至我取悅他們。	1	2	3	4
	1	2	3	4
60. 父母沒有教導我要對他人或我做的事負責任。				
61. 父母要我遵守的紀律很少。	1	2	3	4
62. 父母很少關注我的行為。	1	2	3	4
63. 就算我做得不對，父母亦不會嘗試阻止我。	1	2	3	4
64. 我可以隨意外出，而不必事先與父母商量。	1	2	3	4
	1	2	3	4

	十分不同意	不同意	同意	十分同意
65. 父母期望我在任何時候都做到最好。	1	2	3	4
66. 父母在很多方面都要求完美。	1	2	3	4
67. 父母令我覺得差不多所有我做的事情都不夠好。	1	2	3	4
68. 父母強調我要成功及競爭。	1	2	3	4
69. 當我表現優異時，父母似乎會愛及留意我多些。	1	2	3	4
70. 無論我做任何事，父母都迫我盡全力。	1	2	3	4
71. 父母給予我的幫助並不足夠。	1	2	3	4
72. 父母對我冷漠。	1	2	3	4
73. 父母很少和我傾談。	1	2	3	4
74. 父母不明白我。	1	2	3	4
75. 父母常常表現得不關心我。	1	2	3	4

下列是一些形容你一些想法的句子，請選擇最適合你的答案：

	非常不同意	頗不同意	有些不同意	有些同意	頗同意	非常同意
1. 很多時，我找不到一個可以照顧或真心關心我的人。	1	2	3	4	5	6
2. 普遍來說，沒有人給予我關懷、支持及愛心。	1	2	3	4	5	6
3. 很多時，我不覺得我對某些人來說是值得特別注重的。	1	2	3	4	5	6
4. 許多時候，沒有人真的明白我或體會到我的需要和感受。	1	2	3	4	5	6
5. 當我有困難時，別人很少給我有用的意見或方向。	1	2	3	4	5	6
6. 我會纏著某些和我關係親密的人，因為我怕他們會離開我。	1	2	3	4	5	6
7. 我非常需要某一些人，所以我擔心會失去他們。	1	2	3	4	5	6
8. 我擔心與我親密的人離開和拋棄我。	1	2	3	4	5	6
9. 當我發現我關心的人正在遠離我時，我感到沮喪。	1	2	3	4	5	6
10. 有時，我非常擔心其他人會離開我。	1	2	3	4	5	6
11. 我覺得別人想從我身上找好處。	1	2	3	4	5	6
12. 為免被人固意傷害，在人前，我要保持警覺。	1	2	3	4	5	6
13. 總有一天會有人出賣我。	1	2	3	4	5	6
14. 我對於他人的行為動機感到懷疑。	1	2	3	4	5	6
15. 我常常留心別人最終想達到的目的。	1	2	3	4	5	6
16. 如果我喜歡的人發現我的缺點，他/她便不會愛我。	1	2	3	4	5	6
17. 如果我喜歡的人發現真正的‘我’，他/她便不會願意接近我。	1	2	3	4	5	6
18. 我不值得他人愛錫、關心及注意。	1	2	3	4	5	6
19. 我覺得我是不可愛的。	1	2	3	4	5	6
20. 我根本不能向人揭露‘真的我’。	1	2	3	4	5	6

	非常不同意	頗不同意	不同意	同意	頗同意	非常同意
21. 我差不多沒有一樣功課做得比人好。	1	2	3	4	5	6
22. 我沒有能力去做出一些成就。	1	2	3	4	5	6
23. 在工作及成就上，大多數人都比我能幹。	1	2	3	4	5	6
24. 在工作上，我不如大部份人般有天份。	1	2	3	4	5	6
25. 在學校方面，我不如大部份人般聰明。	1	2	3	4	5	6
26. 我覺得自己沒有能力去處理自己的日常生活。	1	2	3	4	5	6
27. 在日常生活上，我是一個依賴的人。	1	2	3	4	5	6
28. 我缺乏常識。	1	2	3	4	5	6
29. 在日常環境中，我不能依靠自己的判斷。	1	2	3	4	5	6
30. 我沒有足夠的信心去應付每天遇到的問題。	1	2	3	4	5	6
31. 我不能逃避有一些不好事情將要發生的感覺。	1	2	3	4	5	6
32. 我覺得一個災難（天災、罪案、經濟、醫療等）會隨時隨地發生。	1	2	3	4	5	6
33. 我擔心會被襲擊。	1	2	3	4	5	6
34. 我擔心我會失去所有的金錢或財物而變得貧窮。	1	2	3	4	5	6
35. 我擔心我已患上了一些嚴重的疾病，即使醫生還沒有診斷出來。	1	2	3	4	5	6
36. 雖然我同齡的人都可以開始獨立，減少依賴父母，但我不能。	1	2	3	4	5	6
37. 父母和我均過份介入對方的生活及問題內。	1	2	3	4	5	6
38. 我和父母之間，難以隱瞞一些私隱，因為我會感到對不起他們。	1	2	3	4	5	6
39. 我總感到我的生活是受父母的支配 -- 我沒有自己的生活。	1	2	3	4	5	6
40. 我常覺得我沒有一個可以跟父母分開的獨立身份。	1	2	3	4	5	6
41. 我經常照顧身邊的人。	1	2	3	4	5	6
42. 我是一個好人，因為我顧慮別人多於自己。	1	2	3	4	5	6
43. 我常忙於為我關心的人做事，以致我只有很少私人時間。	1	2	3	4	5	6
44. 我經常擔任聆聽他人問題的角色。	1	2	3	4	5	6
45. 別人認為我為其他人做的太多，為自己做的卻太少。	1	2	3	4	5	6
46. 要對他人表示好感（例如：喜歡、關心），我感到非常不自然。	1	2	3	4	5	6
47. 我覺得向他人表達自己的感受是尷尬的。	1	2	3	4	5	6
48. 我覺得主動向他人表示親切是困難的。	1	2	3	4	5	6
49. 我過份地控制自己，以致他人認為我是沒有感情的。	1	2	3	4	5	6
50. 別人認為我為人拘謹，不夠開放。	1	2	3	4	5	6
51. 在很多事情上，我要做到最好；我不能接受自己是第二。	1	2	3	4	5	6
52. 我想做到最好；我不是只是做到“夠了”便算。	1	2	3	4	5	6
53. 我一定要完成所有自己的責任。	1	2	3	4	5	6
54. 我覺得我有不斷的壓力去完成工作。	1	2	3	4	5	6
55. 當我犯錯時，我不會讓自己逃避或替自己找借口。	1	2	3	4	5	6

	非常不同意	頗不同意	不同意	同意	頗同意	非常同意
56. 我不能迫自己去完成一些例行或沈悶的工作。	1	2	3	4	5	6
57. 如果我不能達到目標，我會變得容易沮喪及放棄。	1	2	3	4	5	6
58. 我很難爲了實現長遠的目標，而放下目前的享樂。	1	2	3	4	5	6
59. 我不能迫自己去做些不喜歡的事，即使它對我有利。	1	2	3	4	5	6
60. 我很難下定決心。	1	2	3	4	5	6
61. 我擔心我忿怒不受控制時，會去嚴重傷害他人身體或感受。	1	2	3	4	5	6
62. 我一定要控制自己的情緒或衝動，不然將會有不幸的事情發生。	1	2	3	4	5	6
63. 我擔心我不能控制自己的情緒。	1	2	3	4	5	6

在過去一個月...

	從不	有時	頗多時候	經常
1. 我想哭。	1	2	3	4
2. 我想一走了之或逃避。	1	2	3	4
3. 我認爲生存沒有價值。	1	2	3	4
4. 我覺得很孤單。	1	2	3	4
5. 我的憂愁已達到難以忍受的地步。	1	2	3	4
6. 我感到十分苦悶。	1	2	3	4
7. 我感到做每件事都十分吃力。	1	2	3	4
8. 我覺得自己一無是處。	1	2	3	4
9. 我感到失望。	1	2	3	4
10. 我經常覺得傷心。	1	2	3	4
11. 我覺得沒有人關心我。	1	2	3	4
1. 當我做決定的時候，我感到困難。	1	2	3	4
2. 我感到緊張。	1	2	3	4
3. 我感到憂慮。	1	2	3	4
4. 我感到心神不定。	1	2	3	4
5. 我感到煩亂。	1	2	3	4
6. 我感到害怕。	1	2	3	4
7. 我有被壓迫的感覺。	1	2	3	4
8. 我擔心父母會和我說些什麼。	1	1	3	4
9. 我覺得神經過敏。	1	1	3	4
10. 我憂慮不幸事情可能發生。	1	1	3	4

請根據你現在或過去六個月內的情況，評定下列每一項對你描述之準確程度。

	不準確	接近或間中 準確	非常或經 常準確
1. 我經常爭辯。	1	2	3
2. 我愛誇口。	1	2	3
3. 我對別人刻薄，斤斤計較。	1	2	3
4. 我要求別人經常注意自己。	1	2	3
5. 我破壞別人的東西。	1	2	3
6. 我在學校不聽話。	1	2	3
7. 我做了不應做的事也不感到內疚。	1	2	3
8. 我妒忌別人。	1	2	3
9. 我經常與人打架。	1	2	3
10. 我攻擊他人身體。	1	2	3
11. 我經常尖叫。	1	2	3
12. 我炫耀自己或扮小丑。	1	2	3
13. 我很固執。	1	2	3
14. 我的情緒或感受會突然變化。	1	2	3
15. 我說話過多。	1	2	3
16. 我常戲弄他人。	1	2	3
17. 我的脾氣暴躁。	1	2	3
18. 我恐嚇要傷害他人。	1	2	3
19. 我比其他年青人更吵鬧。	1	2	3

個人資料

性別： ☐ 男 ☐ 女 年齡： _____ 班級： _____

父親教育程度：

☐ 小學或以下 ☐ 中學 (中一至中五) ☐ 預科 ☐ 大專/大學或以上

父親通常職業(就算現時沒有)：

☐ 專業 ☐ 行政 ☐ 文員 ☐ 技術人員 ☐ 工人

母親教育程度：

☐ 小學或以下 ☐ 中學 (中一至中五) ☐ 預科 ☐ 大專/大學或以上

母親通常職業(就算現時沒有)：

☐ 專業 ☐ 行政 ☐ 文員 ☐ 技術人員 ☐ 工人 ☐ 家庭主婦

-問卷完成 多謝合作-

Appendix III

Parenting Scale

父母教養方式與子女成長問卷調查

下列是一些形容你和父母關係的句子，請圈出最適合你的答案：

	十分不同意	不同意	同意	十分同意
1. 父母會和我一起玩樂或做一些開心的活動。	1	2	3	4
2. 父母花時間陪伴及留意我。	1	2	3	4
3. 我和父母的關係親密。	1	2	3	4
4. 對於和我有關的事，父母都表現得很有興趣。	1	2	3	4
5. 父母抽時間和我傾談。	1	2	3	4
6. 當我遇到困難時，父母會支持及關心我。	1	2	3	4
7. 父母在說話及行為上顯示出他們喜歡我。	1	2	3	4
8. 當我做事做得不順利時，父母會安慰及鼓勵我。	1	2	3	4
9. 父母會稱讚我。	1	2	3	4
10. 我和父母之間存在著一種溫馨、親密及親切的感覺。	1	2	3	4
11. 父母在行為上對我表現出關心。	1	2	3	4
12. 父母和我交談的語調是友善及親切的。	1	2	3	4
13. 如果我在功課上有不明白的地方，父母會指導我。	1	2	3	4
14. 父母理性及客觀地給予我指導和方向。	1	2	3	4
15. 當我有過失時，父母會冷靜地向我解釋我的錯處。	1	2	3	4
16. 當我面對困難時，父母會給予我意見及指導。	1	2	3	4
17. 當我不知如何抉擇時，父母會給予我意見。	1	2	3	4
18. 父母鼓勵我決定自己的事。	1	2	3	4
19. 只要不違反大家共同定下的規則，父母讓我決定自己的事。	1	2	3	4
20. 如果事情是合理的，父母會讓我去做。	1	2	3	4
21. 父母會給予我想要的自由，不過我得遵守彼此間同意的規則。	1	2	3	4
22. 父母讓我計劃我想做的事，若那是個好的計劃，他們會支持我去做。	1	2	3	4
23. 父母對我的態度和要求，時常無故改變。	1	2	3	4
24. 父母時常改變對我的管教方法，令我無法適從。	1	2	3	4
25. 父母對我的要求和規則經常互相矛盾。	1	2	3	4
26. 父母的態度和要求隨著他們的心情狀況而隨時改變。	1	2	3	4
27. 父母之間，對我並沒有一致的意見和規則。	1	2	3	4
28. 父母之間，對我的要求時常出現矛盾。	1	2	3	4
29. 若果我做錯事，父母會用手打我。	1	2	3	4
30. 我做錯事時，父母會用皮帶、鞭子或其他物件打我。	1	2	3	4
31. 父母給我的懲罰是多過我應得的。	1	2	3	4
32. 父母無緣無故打我。	1	2	3	4

	十分不 同意	不同 意	同意	十分同 意
66. 父母期望我在任何時候都做到最好。	1	2	3	4
67. 父母在很多方面都要求完美。	1	2	3	4
68. 父母令我覺得差不多所有我做的事情都不夠好。	1	2	3	4
69. 父母強調我要成功及競爭。	1	2	3	4
70. 當我表現優異時，父母似乎會愛及留意我多些。	1	2	3	4
71. 無論我做任何事，父母都迫我盡全力。	1	2	3	4
72. 父母給予我的幫助並不足夠。	1	2	3	4
73. 父母對我冷漠。	1	2	3	4
74. 父母很少和我傾談。	1	2	3	4
75. 父母不明白我。	1	2	3	4
76. 父母常常表現得不關心我。	1	2	3	4

個人資料

性別： ☐ 男 ☐ 女 年齡： _____ 班級： _____

父親教育程度：

☐ 小學或以下 ☐ 中學（中一至中五） ☐ 預科 ☐ 大專/大學或以上

父親通常職業(就算現時沒有)：

☐ 專業 ☐ 文員 ☐ 技術人員 ☐ 工人

母親教育程度：

☐ 小學或以下 ☐ 中學（中一至中五） ☐ 預科 ☐ 大專/大學或以上

母親通常職業(就算現時沒有)：

☐ 專業 ☐ 文員 ☐ 技術人員 ☐ 工人 ☐ 家庭主婦

家庭狀況：

☐ 核心家庭（即子女與親生父母同住）

☐ 重組家庭（即同住父母再婚）

☐ 單親家庭

原因： ☐ 分居或離婚 ☐ 父親或母親死亡

	十分不 同意	不同 意	同意	十分同 意
33. 與我的兄弟姐妹比較，父母對我特別差。	1	2	3	4
34. 如果有事情發生，我通常是家中唯一受責備的一個。	1	2	3	4
35. 我覺得父母不想要我。	1	2	3	4
36. 父母常常批評我，就算我做很多事情，也無法取悅他們。	1	2	3	4
37. 我覺得父母不愛或不接受我。	1	2	3	4
38. 父母經常當著別人的面批評我既懶惰，又無用。	1	2	3	4
39. 父母常常忽視或批評我的態度和感受。	1	2	3	4
40. 父母不允許我做一些其他孩子可以做的事，因為他們害怕我會出事。	1	2	3	4
41. 父母覺得如果沒有他們在我身邊，我便不能照顧自己。	1	2	3	4
42. 父母過份擔心我會生病、發生意外或做錯事。	1	2	3	4
43. 父母會替我做很多事情，而不讓我自己去做。	1	2	3	4
44. 父母把我當作小孩子般看待。	1	2	3	4
45. 父母過份呵護我。	1	2	3	4
46. 父母令我覺得我沒有足夠的能力去作決定或下判斷。	1	2	3	4
47. 我覺得我沒有足夠的獨立能力去與父母分開。	1	2	3	4
48. 由於父/母是很能幹的，所以我會依賴他們，而沒有自己的主見。	1	2	3	4
49. 父母想我依賴他們。	1	2	3	4
50. 父母並不鼓勵我依靠自己的能力去解決困難或問題。	1	2	3	4
51. 父母一定要我遵從他們的規則及指示，否則便不給我活動的自由。	1	2	3	4
52. 我做任何事都要先徵求父母的同意；若不，他們會懲罰我。	1	2	3	4
53. 父母嚴重警告我，犯錯是不可以接受的。	1	2	3	4
54. 父母不許我做他們認為不正確的事；否則他們會嚴厲地處罰我。	1	2	3	4
55. 父母嚴重警告我，不可以不用功讀書。	1	2	3	4
56. 父母總是向我說類似這樣的話：「如果你這樣做，我會很傷心」。	1	2	3	4
57. 父母總是向我說類似這樣的話：「如果你這樣做，你便有負我養育之恩」。	1	2	3	4
58. 如果我令父母失望，他們會不理會我。				
59. 如果我與父母有不同的意見，他們會顯得不友善。	1	2	3	4
60. 如果我令父母不快，他們會不和我說話，直至我取悅他們。	1	2	3	4
	1	2	3	4
61. 父母沒有教導我要對他人或我做的事負責任。				
62. 父母要我遵守的紀律很少。	1	2	3	4
63. 父母很少關注我的行為。	1	2	3	4
64. 就算我做得不對，父母亦不會嘗試阻止我。	1	2	3	4
65. 我可以隨意外出，而不必事先與父母商量。	1	2	3	4
	1	2	3	4

Appendix IV

Chinese Version of the Schema Questionnaire (SQ)

下列是一些形容你一些想法的句子，請選擇最適合你的答案：

	非常不同意	頗不同意	有些不同意	有些同意	頗同意	非常同意
1. 很多時，我找不到一個可以照顧或真心關心我的人。	1	2	3	4	5	6
2. 普遍來說，沒有人給予我關懷、支持及愛心。	1	2	3	4	5	6
3. 很多時，我不覺得我對某些人來說是值得特別注重的。	1	2	3	4	5	6
4. 許多時候，沒有人真的明白我或體會到我的需要和感受。	1	2	3	4	5	6
5. 當我有困難時，別人很少給我有用的意見或方向。	1	2	3	4	5	6
6. 我會纏著某些和我關係親密的人，因為我怕他們會離開我。	1	2	3	4	5	6
7. 我非常需要某一些人，所以我擔心會失去他們。	1	2	3	4	5	6
8. 我擔心與我親密的人離開和拋棄我。	1	2	3	4	5	6
9. 當我發現我關心的人正在遠離我時，我感到沮喪。	1	2	3	4	5	6
10. 有時，我非常擔心其他人會離開我。	1	2	3	4	5	6
11. 我覺得別人想從我身上找好處。	1	2	3	4	5	6
12. 為免被人固意傷害，在人前，我要保持警覺。	1	2	3	4	5	6
13. 總有一天會有人出賣我。	1	2	3	4	5	6
14. 我對於他人的行為動機感到懷疑。	1	2	3	4	5	6
15. 我常常留心別人最終想達到的目的。	1	2	3	4	5	6
16. 如果我喜歡的人發現我的缺點，他/她便不會愛我。	1	2	3	4	5	6
17. 如果我喜歡的人發現真正的‘我’，他/她便不會願意接近我。	1	2	3	4	5	6
18. 我不值得他人愛錫、關心及注意。	1	2	3	4	5	6
19. 我覺得我是不可愛的。	1	2	3	4	5	6
20. 我根本不能向人揭露“真的我”。	1	2	3	4	5	6
21. 我差不多沒有一樣功課做得比人好。	1	2	3	4	5	6
22. 我沒有能力去做出一些成就。	1	2	3	4	5	6
23. 在工作及成就上，大多數人都比我能幹。	1	2	3	4	5	6
24. 在工作上，我不如大部份人般有天份。	1	2	3	4	5	6
25. 在學校方面，我不如大部份人般聰明。	1	2	3	4	5	6
26. 我覺得自己沒有能力去處理自己的日常生活。	1	2	3	4	5	6
27. 在日常生活上，我是一個依賴的人。	1	2	3	4	5	6
28. 我缺乏常識。	1	2	3	4	5	6
29. 在日常環境中，我不能依靠自己的判斷。	1	2	3	4	5	6
30. 我沒有足夠的信心去應付每天遇到的問題。	1	2	3	4	5	6
31. 我不能逃避有一些不好事情將要發生的感覺。	1	2	3	4	5	6
32. 我覺得一個災難（天災、罪案、經濟、醫療等）會隨時隨地發生。	1	2	3	4	5	6
33. 我擔心會被襲擊。	1	2	3	4	5	6
34. 我擔心我會失去所有的金錢或財物而變得貧窮。	1	2	3	4	5	6
35. 我擔心我已患上了一些嚴重的疾病，即使醫生還沒有診斷出來。	1	2	3	4	5	6

	非常不同意	頗不同意	不同意	同意	頗同意	非常同意
36. 雖然我同齡的人都可以開始獨立，減少依賴父母，但我不能。	1	2	3	4	5	6
37. 父母和我均過份介入對方的生活及問題內。	1	2	3	4	5	6
38. 我和父母之間，難以隱瞞一些私隱，因為我會感到對不起他們。	1	2	3	4	5	6
39. 我總感到我的生活是受父母的支配 -- 我沒有自己的生活。	1	2	3	4	5	6
40. 我常覺得我沒有一個可以跟父母分開的獨立身份。	1	2	3	4	5	6
41. 我經常照顧身邊的人。	1	2	3	4	5	6
42. 我是一個好人，因為我顧慮別人多於自己。	1	2	3	4	5	6
43. 我常忙於為我關心的人做事，以致我只有很少私人時間。	1	2	3	4	5	6
44. 我經常擔任聆聽他人問題的角色。	1	2	3	4	5	6
45. 別人認為我為其他人做的太多，為自己做的卻太少。	1	2	3	4	5	6
46. 要對他人表示好感（例如：喜歡、關心），我感到非常不自然。	1	2	3	4	5	6
47. 我覺得向他人表達自己的感受是尷尬的。	1	2	3	4	5	6
48. 我覺得主動向他人表示親切是困難的。	1	2	3	4	5	6
49. 我過份地控制自己，以致他人認為我是沒有感情的。	1	2	3	4	5	6
50. 別人認為我為人拘謹，不夠開放。	1	2	3	4	5	6
51. 在很多事情上，我要做到最好；我不能接受自己是第二。	1	2	3	4	5	6
52. 我要求事事完美。	1	2	3	4	5	6
53. 大部份時間我要保持最佳狀態。	1	2	3	4	5	6
54. 差不多我做的所有事情都不夠好；我是可以做得更好的。	1	2	3	4	5	6
55. 我經常都要表現第一。	1	2	3	4	5	6
56. 我不能迫自己去完成一些例行或沈悶的工作。	1	2	3	4	5	6
57. 如果我不能達到目標，我會變得容易沮喪及放棄。	1	2	3	4	5	6
58. 我很難為了實現長遠的目標，而放下目前的享樂。	1	2	3	4	5	6
59. 我不能迫自己去做些不喜歡的事，即使它對我有利。	1	2	3	4	5	6
60. 我很難下定決心。	1	2	3	4	5	6
61. 我擔心我忿怒不受控制時，會去嚴重傷害他人身體或感受。	1	2	3	4	5	6
62. 我一定要控制自己的情緒或衝動，不然將會有不幸的事情發生。	1	2	3	4	5	6
63. 我擔心我不能控制自己的情緒。	1	2	3	4	5	6

Appendix V

State-Trait Anxiety Inventory – State

1. 當我做決定的時候，我感到困難。	1	2	3	4
2. 我感到緊張。	1	2	3	4
3. 我感到憂慮。	1	2	3	4
4. 我感到心神不定。	1	2	3	4
5. 我感到煩亂。	1	2	3	4
6. 我感到害怕。	1	2	3	4
7. 我有被壓迫的感覺。	1	2	3	4
8. 我擔心父母會和我說些什麼。	1	2	3	4
9. 我覺得神經過敏。	1	2	3	4
10. 我憂慮不幸事情可能發生。	1	2	3	4

Appendix VI

Depression Self-Rating Scale

在過去一個月...

	從不	有時	頗多時候	經常
1. 我想哭。	1	2	3	4
2. 我想一走了之或逃避。	1	2	3	4
3. 我認為生存沒有價值。	1	2	3	4
4. 我覺得很孤單。	1	2	3	4
5. 我的憂愁已達到難以忍受的地步。	1	2	3	4
6. 我感到十分苦悶。	1	2	3	4
7. 我感到做每件事都十分吃力。	1	2	3	4
8. 我覺得自己一無是處。	1	2	3	4
9. 我感到失望。	1	2	3	4
10. 我經常覺得傷心。	1	2	3	4
11. 我覺得沒有人關心我。	1	2	3	4

Appendix VII

Youth Self-Report (Aggression subscale)

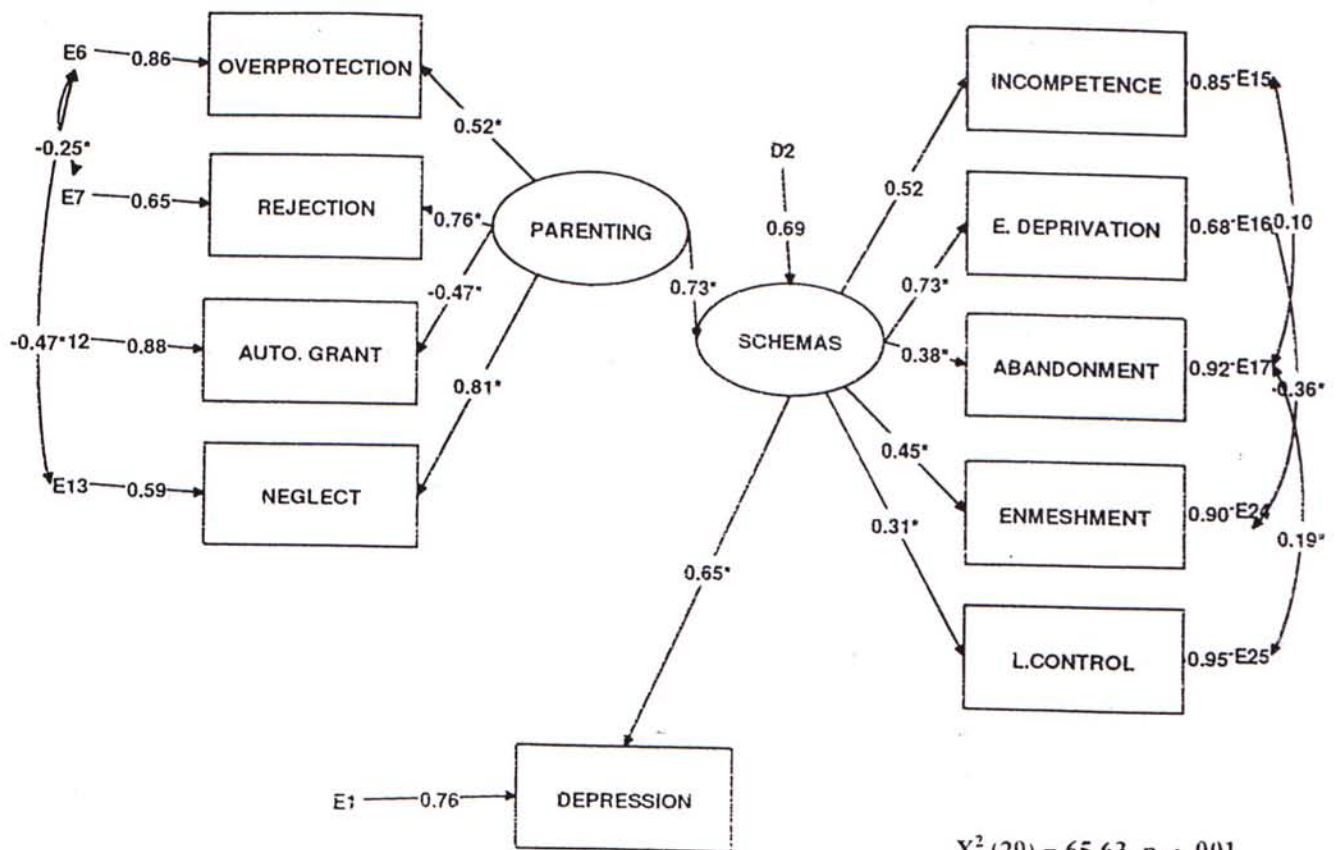
請根據你現在或過去六個月內的情況，評定下列每一項對你描述之準確程度。

	不準確	接近或間中 準確	非常或經 常準確
1. 我經常爭辯。	0	1	2
2. 我愛誇口。	0	1	2
3. 我對別人刻薄，斤斤計較。	0	1	2
4. 我要求別人經常注意自己。	0	1	2
5. 我破壞別人的東西。	0	1	2
6. 我在學校不聽話。	0	1	2
7. 我做了不應做的事也不感到內疚。	0	1	2
8. 我妒忌別人。	0	1	2
9. 我經常與人打架。	0	1	2
10. 我攻擊他人身體。	0	1	2
11. 我經常尖叫。	0	1	2
12. 我炫耀自己或扮小丑。	0	1	2

13. 我很固執。	0	1	2
14. 我的情緒或感受會突然變化。	0	1	2
15. 我說話過多。	0	1	2
16. 我常戲弄他人。	0	1	2
17. 我的脾氣暴躁。	0	1	2
18. 我恐嚇要傷害他人。	0	1	2
19. 我比其他年青人更吵鬧。	0	1	2

Appendix VIII

Model of depression for boys and girls

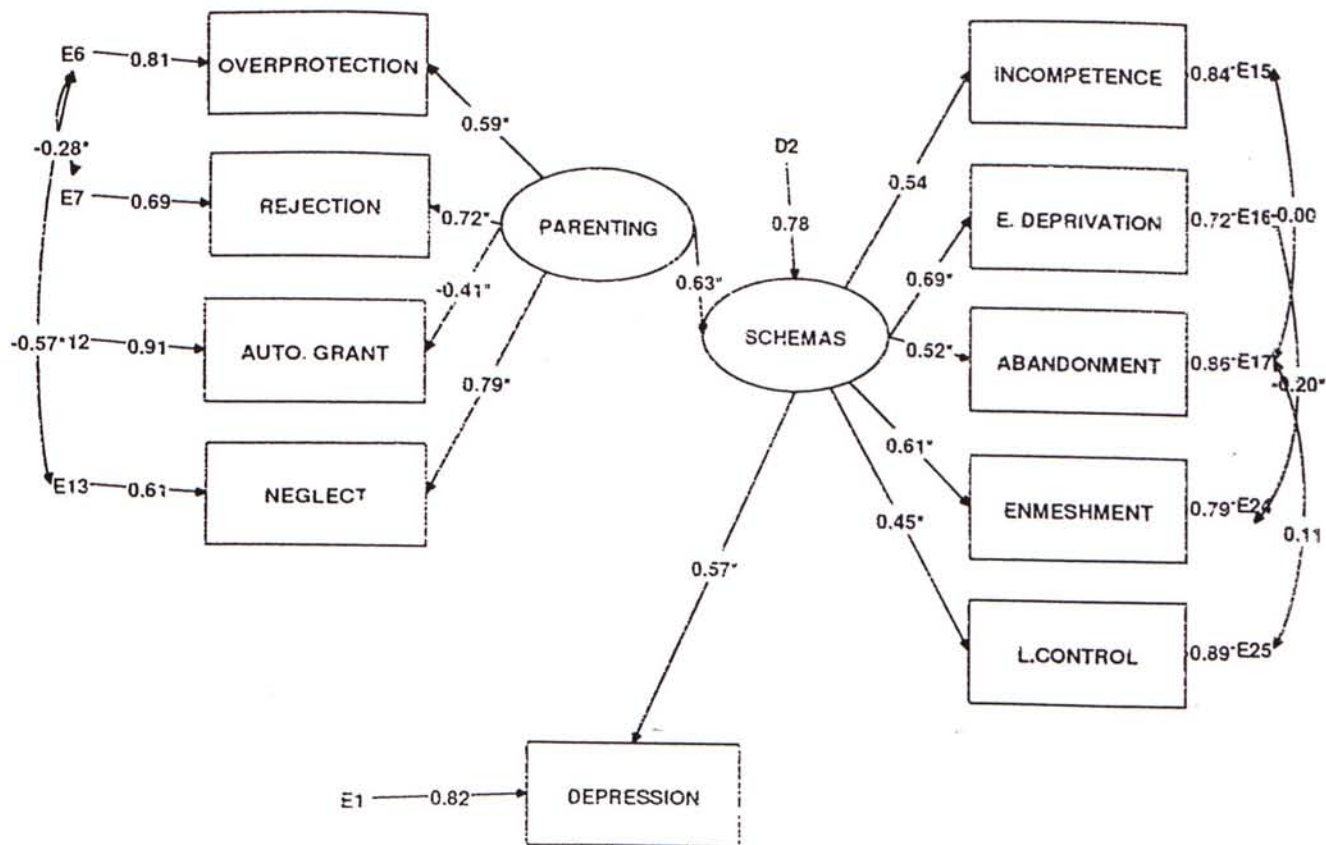


$X^2 (29) = 65.63, p < .001$
 CFI = .95
 RMSEA = .06

NOTE:

AUTO.GRANT = AUTONOMOUS GRANT;
 E.DEPRIVATION = EMOTIONAL DEPRIVATION;
 INCOMPETENCE = INCOMPETENCE/INFERIORITY;
 L.CONTROL = FEAR OF LOSING CONTROL.

Model for depression (boys).



NOTE:

AUTO.GRANT = AUTONOMOUS GRANT;

E.DEPRIVATION = EMOTIONAL DEPRIVATION;

INCOMPETENCE = INCOMPETENCE/INFERIORITY;

L.CONTROL = FEAR OF LOSING CONTROL.

$\chi^2 (29) = 117.00, p < .001$

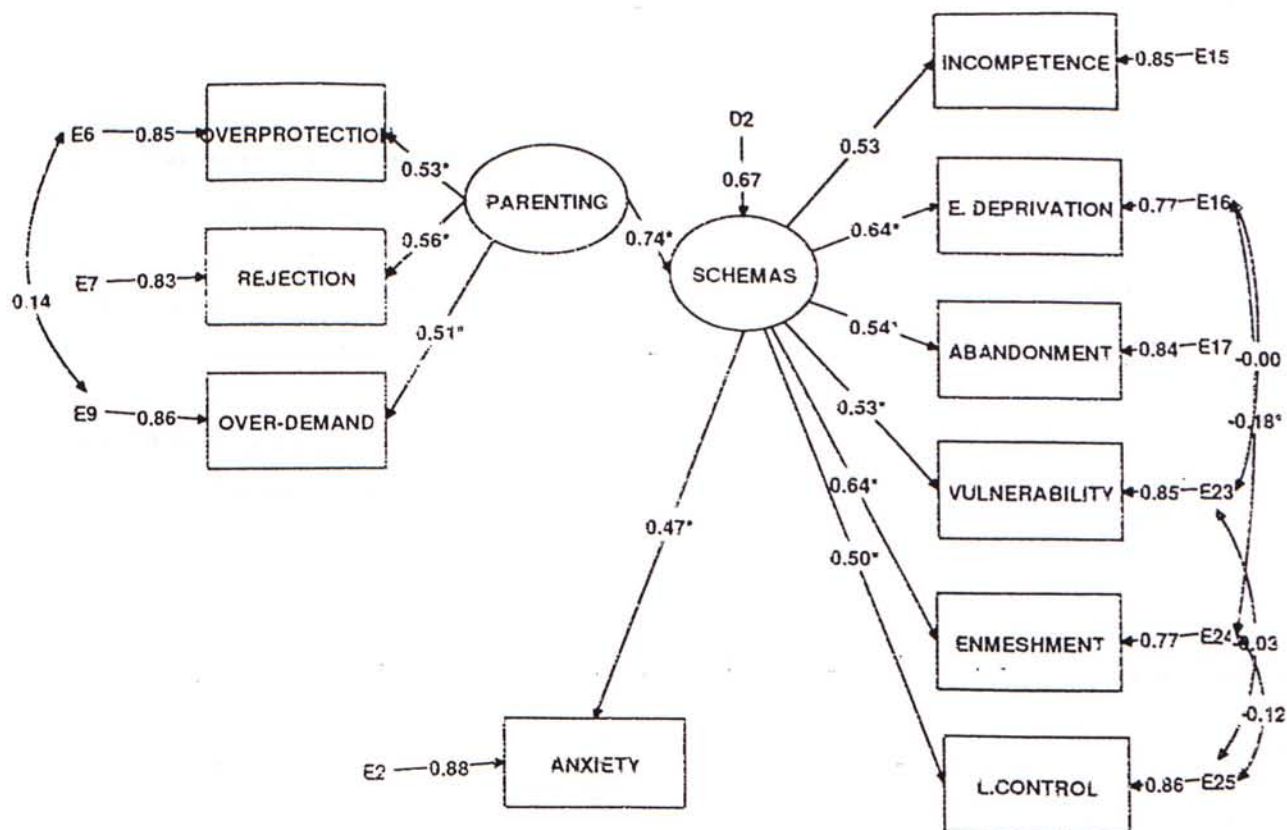
CFI = .90

RMSEA = .09

Model for depression (girls).

Appendix IX

Models of anxiety for boys and girls



NOTE:

INCOMPETENCE = INCOMPETENCE/INFERIORITY;

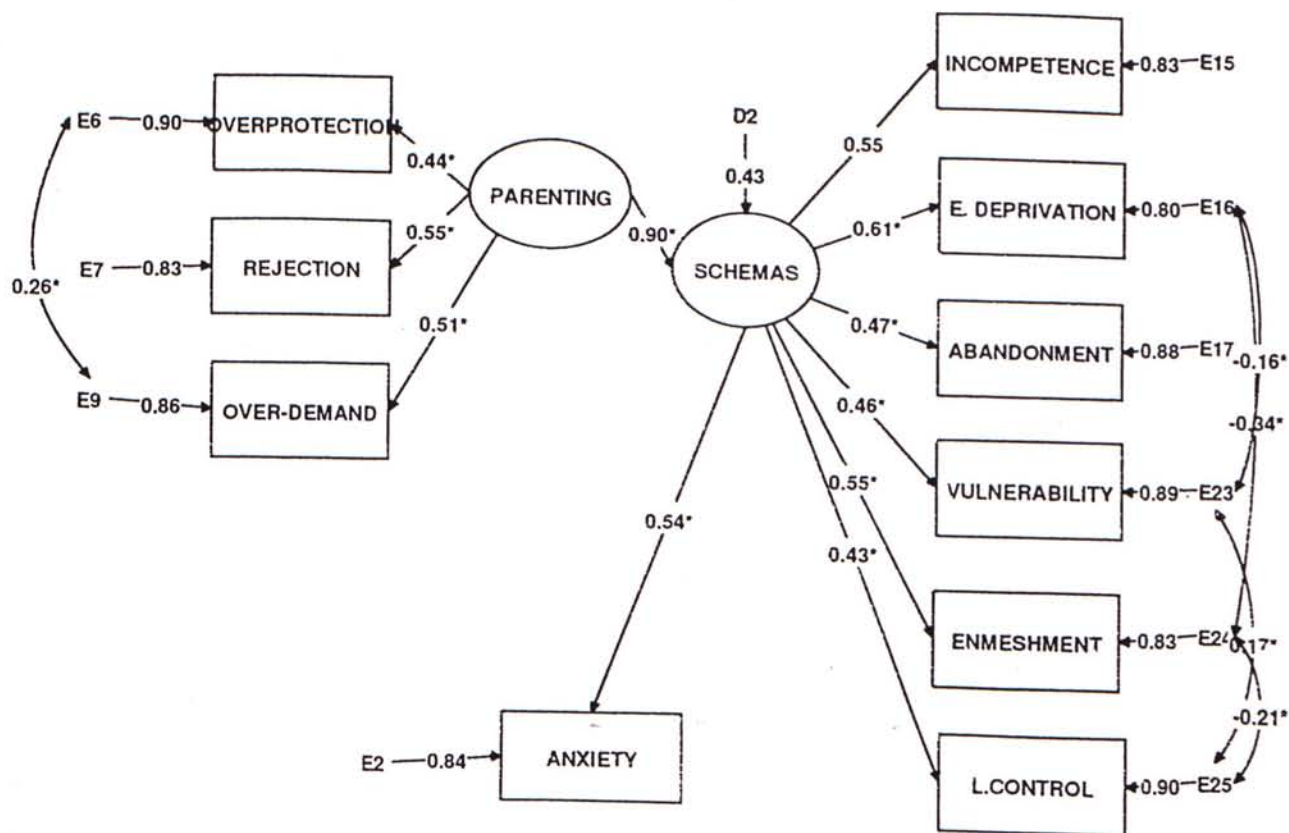
L.CONTROL=FEAR OF LOSING CONTROL.

$X^2(29) = 42.78, p = .05$

CRI = .98

RMSEA = .04

Model for anxiety (boys).



NOTE:

INCOMPETENCE = INCOMPETENCE/INFERIORITY;

L.CONTROL=FEAR OF LOSING CONTROL.

$\chi^2 (29) = 91.21, p < .001$

CFI = .91

RMSEA = .07

Model for anxiety (girls).

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